

TENNESSEE'S IV-E WAIVER DEMONSTRATION PROJECT FINAL EVALUATION REPORT APRIL 2020

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Final Evaluation Report Tennessee's IV-E Waiver Demonstration Project April 2020

Introduction and Overview

Background and Context

The Tennessee Department of Children and Family Services (TNDCS) has a long and productive history of work with Chapin Hall at the University of Chicago. The work together has included the institution of performance-based contracting for TNDCS' network of private providers; performance monitoring Chapin Hall has provided TNDCS as a part of its settlement agreement; ongoing research and analytic work; and, capacity building for staff. Chapin Hall was thrilled to have the opportunity to again partner with TNDCS, this time as the primary evaluator of their IV-E Waiver Demonstration Project.

As described in the Interim Evaluation Report, Chapin Hall was invited to collaborate with TNDCS very early on in the process of identifying the best opportunities for taking advantage of the flexible funding offered by the IV-E Waiver mechanism. Using the products Chapin Hall has produced for TNDCS over time as well as some new, ad hoc analyses, Chapin Hall helped the Department identify variation in performance that spoke clearly to opportunities to invest in new practices. Ultimately, TNDCS decided to make investments in the following areas:

Family Advocacy and Support Tool (FAST). Beginning in 2014, staff working in all non-custodial program areas were trained to use the FAST as a decision/planning support tool and as an assessment of child and family well-being. The FAST is intended to help staff identify specific areas where children, youth, and families could use additional support, so that service determinations and referrals best fit families' actual needs.

Keeping Foster Parents Supported and Trained (KEEP). KEEP is an evidenced-based support and skill enhancement model designed for foster and kinship parents. The program supports foster and kin families to promote child well-being and prevent placement disruptions. KEEP takes a group format, with foster parents meeting for 16 weeks to participate in a curriculum focused on teaching foster parents to increase the use of positive reinforcement, set consistent limits, and to utilize non-harsh discipline methods.

Nurturing Parenting Program (NPP). Nurturing Parenting Program is a family centered trauma informed curriculum designed to build nurturing parenting skills as an alternative to abuse and neglectful parenting and child rearing practices. The long-term goals of the program include the prevention of recidivism in families involved with the child welfare system and to stop the intergenerational cycle of abuse by teaching positive parenting behaviors.

R3. R3 is an evidence-informed implementation support model, rather than an evidence-based intervention. R3 provides guidelines for supervisors in their interactions with caseworkers and, subsequently, caseworkers interacting with parents/caregivers; the focus is on the improvement of engagement skills and techniques for motivating families to fully participate in their service/permanency plan. Specifically, R3 focuses on the value of reinforcing effort, reinforcing

small steps towards goals, and reinforcing roles and relationships; the theory is that if each interaction with a caseworker and/or caregiver is infused with at least one of these principles – effort, small steps, and role/relationship – engagement will be better, motivation higher, and positive outcomes (i.e., less recurrence of maltreatment, less time to permanency) more likely to occur.

The TNDCS demonstration project logic model was unveiled in the IDIR and the evaluation plan, both of which were submitted to the Children's Bureau in the early Fall of 2014. TNDCS' Waiver Demonstration Project has an official 'start date' of October 1, 2014.

Evaluation of the Waiver Demonstration

Broadly speaking, the purpose of the demonstration project is to reduce admissions to foster care, reduce lengths of stay in foster care, and improve well-being outcomes for children in foster care. The focus is on children placed in regular family foster homes licensed by TNDCS; that is, the demonstration project does not focus on children placed in foster homes licensed by any of their private providers of foster care.

Our key research questions are organized around the three facets of the evaluation:

Implementation Study

- 1. To what extent are Waiver strategies implemented with adherence to original Waiver-specific strategic plans?
- 2. To what extent are Waiver strategies implemented with fidelity (following model protocols)?
- 3. What associations exist between (a) staff attitudes about child welfare work, their jobs, and Waiver strategies, (b) adherence to Waiver plans, (c) implementation fidelity, and (d) worker time use?

Outcomes Study

- 1. What is the impact of demonstration project on the number of care days used, on average (both for children who enter placement after the implementation as well as children incare at the time demonstration project begins)?
 - a. What is the impact of the demonstration on the likelihood that children will experience reunification within set periods of time?
 - b. For children who are not reunified, what is the impact of the demonstration on the rate and timing of alternative permanency options?
- 2. What is the impact of the demonstration project on the stability of children's placements in care?
- 3. What is the impact of the demonstration project on the likelihood that children will experience a post-permanency maltreatment report, the likelihood that that report will be substantiated, and the likelihood a substantiated report will lead to placement (i.e., reentry)?

Cost Study

- 1. What effect does the Waiver have on child welfare expenditures in TN?
- 2. What effect does the Waiver have on the average daily cost of foster care placement?

The evaluation framework

In the Interim Evaluation Report, we described Chapin Hall's general approach to prospective evaluation studies as recognizing the need to blend rigorous methodology with the real-world contingencies of operating child welfare programs that directly touch the lives of vulnerable children and families. Briefly, the evaluation team used what we call a Continuous Quality Improvement Evaluation Framework (CQI/EF). The evaluation framework stresses state-of-the-art methodology (the technical aspects of which are described in later sections), whereas the CQI component acknowledges the need to provide meaningful, formative feedback to stakeholders who are working with children and families. The evaluation framework overcomes the methodological weaknesses of many CQI models; the CQI framework manages the need for actionable knowledge well before the summative evaluation is complete.

PLAN Process of care Define problem & outcome Develop theory of change investment Design intervention strategy ACT DO Quality of care Adjust Implement investment STUDY Measure outcomes Investment in Monitor implementation capacity Provide feedback

Figure 1. Continuous Quality Improvement Evaluation Framework

The CQI/EF was discussed in a fair amount of detail in the Interim Evaluation Report. Inarguably, most of Chapin Hall's effort over the last few years has been in the PLAN and STUDY phases (see Figure 1). The theory of change that undergirds the TNDCS Waiver Demonstration Project (PLAN) is referred to again and again throughout the Final Evaluation Report. Similarly, as we discuss what we've learned about the implementation and impact of the demonstration, we return to the problems that ostensibly served as the catalysts for the various investments made as part of the demonstration (PLAN). As to the STUDY phase, where most of Chapin Hall's work has concentrated, we would underscore here our commitment to the priority concepts in measurement that are, in many respects, the foundation of all of the work done by the Data Center. These priority concepts, listed below, show up not only in the evaluation work

¹ The Center for State Child Welfare Data (the Data Center) is a partnership between state child welfare agencies, Chapin Hall at the University of Chicago, the American Public Human Services Association, and 12

detailed throughout the pages of this Final Evaluation Report, but surfaced time and again during the technical assistance and support activities in which Chapin Hall participated through the course of Tennessee's Waiver.

- 1. **Know your question**. Measurement starts with a question; the question being asked points to the appropriate approach to measuring change.
- 2. **Stock and flow**. The only way to change the characteristics of the children you have in care now is to change how children enter and exit. When measuring the impact of an intervention, you need to think differently about the children already in care when your intervention goes live (stock) and the children who enter care at some point after the intervention is in place (flow). We take this approach when talking about the impact of TNDCS' demonstration strategies (KEEP, in particular) on permanency. We also separate out the stock and the flow when looking at system-wide trends.
- 3. **Know the population from which you are measuring**. The choice of population depends on the question you're trying to answer. While the population for TNDCS' demonstration project, broadly speaking, includes all children who have come into contact with CPS (i.e., for whom a FAST was required to be completed), the population shifts when measuring change in relation to specific interventions. For example, for KEEP we are most interested in permanency outcomes for children who were between the ages of 4 to 12 years at some point during their time in care. For NPP implementation we are looking at children whose parents met the TN-specific eligibility criteria for NPP.
- 4. Almost always, **use an entry cohort** to answer questions about typical performance. In the Outcomes Study, all system-wide measures are considered longitudinally, using entry cohorts. The one exception is reentry, for which we use exit cohorts.
- 5. Working with parameters. A parameter is a number that characterizes a population. Parameters can be used to describe baseline outcomes and, as such, can be used to predict future performance. We use historical parameters as a way to help us make assessments as to whether performance trends during the demonstration period have improved.
- 6. **Know your data and organize it well**. This involves understanding the variables available to you in the databases that serve as the seed files of the analysis, as well as the date through which activity is reflected (the censor date). It also involves using an event structure to organize data, so that events (admission, placement change, exit, reentry) are stacked in time.
- 7. **Use of likelihood**. Looking at likelihoods, or probabilities, helps see how the odds of something happening children exiting to permanency, for example have changed over time.
- 8. **Identify the window**. Reform can only affect that which has yet to happen. We use this structure when looking at care day utilization.

the Center for Social Services Research, University of California at Berkeley. Core support for the Data Center comes from the Annie E. Casey Foundation and Casey Family Programs.

9. **Stratify**. Establishing diagnostically relevant groups helps in identifying variation in performance. In this report, we stratify by child age at the time foster care began, the amount of time children spent in care prior to the demonstration (for the in-care group), and by entry cohort year (for the admissions group).

Orientation to the Final Evaluation Report

Chapin Hall produced a comprehensive Interim Evaluation Report in 2017. In many ways, the Final Evaluation Report serves as an update to that document. By and large, the structure of this report is the same as the structure used for the Interim Evaluation Report. Major headings and subheadings have been retained. There may be fundamental sections, such as the section on the theory of change for the demonstration project, that we have retained in its entirety, as that material remains unchanged from August 2017 to the present. Otherwise, we summarize findings relayed in the Interim Evaluation Report to make room for updated information that speaks to activities that have transpired since August 2017, when the Interim Evaluation Report was issued. The Interim Evaluation Report will be sent along with this report for ease of reference.

Theory of change/logic model

The TNDCS demonstration project logic model is presented in Figure 2 (below). The model is intended to depict how the statistical modeling of effects will likely unfold.

Figure 2. TNDCS Waiver Demonstration Logic Model

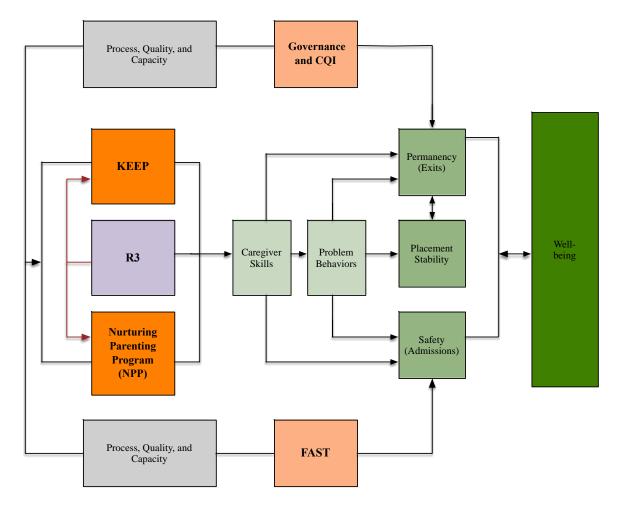


Figure 2, above, lays out the theory of change underlying TNDCS' Waiver project, as well as displaying the nature of each of the hypothesized statistical relationships. Note that the assessment-related changes (FAST), the practice motivated changes (implementation support program, known as R3), and the EBI motivated changes (KEEP, NPP) are each associated with changes in the process of care, the quality of care, and the capacity of individuals to do higher quality work (caseworkers) or provide higher quality care to children (foster parents, parents).²

The implementation of the FAST is represented on the bottom of the graphic. This investment is expected to have a direct effect on placement rates (i.e., safety) by (1) improving the quality of information available to both investigation and assessment-track staff (2) improving the fit between families' needs and the services offered and (3) enabling caseworkers to identify needed services faster. When families can remain together safely, children's functional well-being is improved.

The evidence-based and evidence informed interventions (EBI) are represented toward the middle of the graphic, to the left; note that the box corresponding to R3 is shaded differently to reflect its

² The red lines in the graphic represent moderating effects, such that R3, the implementation support activity targeted at caseworkers, will boost the effects of the foster parent-mediated intervention (Project KEEP) and the parenting intervention, NPP.

status as an implementation support program rather than an evidence-based intervention. As antecedents to changes in well-being, the interventions depicted herein focus on improving the skills of caregivers (parents, foster parents), which will lead to a reduction in children's problem behaviors, thereby increasing placement stability and, ultimately, permanency (which includes reducing reentry). More stable living arrangements are also associated with improved functional well-being in the medium to long run.

Caseworkers. Direct line staff were trained in a casework model (R3), a supervisor-mediated intervention whose objective is to model engagement and positive reinforcement in the supervisory context, with caseworkers transferring these skills to the casework context. TNDCS implemented R3 as a support to the other changes being introduced under the Waiver. The expectation was an improved quality of caseworkers' day-to-day interactions with parents, foster parents, and youth (custodial and non-custodial), which should ultimately yield better outcomes for children.

Note, TNDCS decided to discontinue their formal engagement with R3 as an implementation support model in June 2018.

Foster parents. The foster-parent focused model, Project KEEP, is expected to influence the capacity of foster parents to care for children in custodial care. When foster parents have improved skills children's placements are likely to be more stable, which will increase both the likelihood and the timing of permanent exits from care. These may be direct effects or effects mediated by reductions in children's problem behaviors. That is, when caregivers' capacity to work with children is improved, they can help children regulate their emotions and their behavior. When children's problem behaviors are better managed, their placements are more stable; permanency outcomes are expected to improve as well.

Parents. The Nurturing Parenting Program (NPP) is being offered to families receiving non-custodial services in the East Grand region who meet NPP eligibility criteria, which we describe in more detail in later sections. The program began rolling out in September 2017, after the review period covered by the Interim Evaluation Report.

The outcomes associated with the changes proposed under the demonstration project are explicated in the pages that follow.

FAST

The FAST is expected to help caseworkers better identify what clients need to resolve the safety and risk concerns that emerge at the beginning of a non-custodial event. As a result, service planning will be enhanced, the likelihood of placement in care reduced, and the likelihood of future maltreatment reports reduced as well.

KEEP

KEEP is hypothesized to improve foster parents' caregiving skills. Specifically, KEEP focuses on helping foster parents learn strategies for managing children's problem behaviors so as to (1) reduce foster parents' stress levels in response to those problem behaviors and (2) help children thrive. This skill-building is expected to improve placement stability (fewer placement changes) and permanency (increased likelihood and timing of permanent exits).

NPP

NPP is hypothesized to improve caregivers' ability to nurture and respond to the children under their care. Caregiving responses are expected to become less punitive and more supportive of child development, in line with normative child development. Improved (more attached, compassionate, nurturing) parenting should reduce the likelihood of admission to foster care and the likelihood of a subsequent maltreatment report.

In the sections that follow we provide details on the data sources, data collection methods, and analytic methods we have been using (and will continue to use) to answer the key research questions posed earlier in this report.

Implementation study

A range of qualitative methods was used to monitor the development of TNDCS' Waiver plan and to understand whether the FAST, KEEP, and NPP influenced behaviors in the expected ways. These data collection efforts have been targeted at staff, for the most part. A brief overview of the potential respondents:

CPS-A. These are staff that respond to maltreatment reports that are routed down the assessment track (non-investigative).

CPS-I. These are staff that respond to maltreatment reports in the traditional, investigative manner.

FSS. These are staff that provide Family Support Services – in home services that typically follow a CPS-A or CPS-I case, but this is not always the case. Some FSS cases do not come as a result of a maltreatment report.

FCIP. These are staff that work in the Family Crisis Intervention Program, which serves older children for the most part.

FSW. Family Service Workers are housed in the custodial space. They are the equivalent of case managers for foster care cases.

Content Analysis: Planning and Implementation

Chapin Hall staff reviewed written materials related to pre-implementation decision-making, such as key findings from focus groups, data products, and any other written material that served to document the process through which EBIs were selected, implemented, and monitored.

Structured interviews, Focus Groups, and Online Surveys: Implementation Attitudes

Senior regional staff, team coordinators (TCs), and supervisors were interviewed at various points over the course of the Waiver demonstration period, during which the following topics were addressed:

1. Waiver decision-making: use of evidence, consideration of CQI concepts in the selection and implementation of EBIs

- 2. Staff morale
- 3. Shifts in supervisory responsibilities
- 4. Implementation of new practices (FAST, EBIs, implementation support models such as R3): practical concerns, utility in practice, etc.

Caseworkers and supervisors were also surveyed three times over the course of the demonstration period. Questions related to the various changes that occurred as a part of the Waiver demonstration project. The survey was used to get a broad sense of implementation issues, such as:

- 1. Case skills (technical and interpersonal)
- 2. Job satisfaction, intent-to-leave, and workload
- 3. Supervision
- 4. Organizational culture and climate
- 5. Availability of services to meet client needs
- 6. Attitudes on reunification and the role of well-being in permanency decisions
- 7. Case closure decision-making
- 8. Attitudes on evidence-based practice

Administrative data: Fidelity of EBI Implementation

The evaluation is fortunate to have at its disposal automated systems for tracking referrals to KEEP and NPP. Those data can be linked to the seed analytic files (child spell data) that serve as the foundation for much of the analytic work Chapin Hall does on TNDCS' behalf (see description in the following section). Ultimately, these linked files allow for a full tracking of (1) children who would be considered eligible for KEEP (for example), given their age and their regional assignment, (2) the extent to which eligible children actually received the intervention, and (3) the timing of the intervention relative to other key events.

Outcomes study

The available data allow for the development of a child-specific data file that extends as far back as 1992. From these files we are able to generate performance metrics related to safety (recurrence of maltreatment), placements into care, placement stability while in care, lengths of stay in care, and reentry. These data are included in this Final Evaluation Report.

Analytic Approach

Our analytic approach was described in detail in the Interim Evaluation Report. Using these seed databases, we developed person-period data files that record the time each child spends (a) receiving non-custodial services and/or (b) in care. Spells (or episodes) are divided into time

intervals of a given length (3-month person periods are a starting point). Each person period has associated with it a series of flags indicating whether certain events occurred within the period, notably exposure to an evidence-based intervention, a re-report, admission to care, a placement move, or discharge from custody. The underlying statistical model evaluates the log odds of the event of interest; the "Waiver" effect is captured by whether person-periods that include exposure to one of the demonstration strategies (i.e., during which the FAST was being used, KEEP was offered, etc.) are more likely to end with either a re-report, an admission to care, a placement change, an exit to permanency, and so forth. The person period model can be extended to incorporate a multi-state, competing risk framework.³

Because children are clustered within regions, we account for the nested structure with a multi-level model. In the unconditional model, the level-one intercept is the average rate of exit to permanency, as one example. The multilevel model produces properly weighted estimates of the exit rate (to account for the fact that regions contribute varying amounts of information). Addition of the demonstration effect shows the impact of the demonstration on the average rate. Adding time covariates (i.e., indicating the year during which the interval was observed), controls for any trends in the underlying data as well as other contemporaneous factors present in or affecting the child welfare system that are unrelated to the implementation of the demonstration project.

TNDCS' demonstration project targets all children between the ages of 0 and 21 who receive non-custodial services (investigation, assessment, in-home family support services) or who are placed in non-specialty family foster homes licensed by the public child welfare system. The sample includes the children receiving in-home services or in care at the start of the Waiver demonstration (the legacy caseload) and all new non-custodial cases and admissions involving children entering TNDCS-licensed family foster care during the Waiver. The person-period file structure provides a concise way to account for the timing of the introduction of demonstration components within a child's service trajectory with child welfare. For the legacy caseload, this method addresses the fact that children will be at different points in their placement history at the start of the Waiver. Because the log odds of exit or placement change differ with respect to how long children have been in care (and the log odds of admission to care differs with respect to the chronicity of maltreatment), the person-periods assess the treatment effects after controlling for the timing of the treatment.

Intent to Treat Design

As a general matter, the analysis will consider both intent-to-treat and per-protocol designs as a way to better understand treatment effects in practice. An Intent-to-Treat (ITT) approach requires that everyone assigned to an EBI-implementing region be included in the analysis of treatment effects, regardless of refusal, noncompliance, protocol deviations, withdrawal, or anything else that interferes with post-selection uptake of treatment. ITT analysis avoids biased estimates of the efficacy of an intervention resulting from the removal of non-compliers by accepting that noncompliance and protocol deviations are likely to occur in actual practice. As a consequence,

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³ Steele, F., Goldstein, H., & Browne, W. (2004). A general multilevel multistate competing risks model for event history data, with an application to a study of contraceptive use dynamics. Statistical Modeling, 4(2), 145–159.

in ITT analysis, the estimate of the treatment effect is generally conservative because of dilution attributable to the non-compliance of individuals assigned to the intervention group.⁴

ITT approaches are often compared to what is termed a 'per-protocol' analysis. Per-protocol analyses would, using the present study as an example, exclude children (or the parents/foster parents of children) who deviated from the treatment protocol. One of the main limitations of the per-protocol design is that it can introduce a form of bias called attrition bias, in which the groups of children being compared no longer have similar characteristics. The results of per protocol analyses usually provide a lower level of evidence. Still, because per-protocol analyses tend to better reflect the effects of treatment when faithfully adhered to, they are a worthy complement to ITT analyses.

Cost study

The TNDCS Cost Study is a system-level study that examines statewide spending patterns. The study presents the analysis of fiscal data collected from state fiscal years (SFY) 2012 – 2019.⁵ Under the Waiver agreement, TN was able to retain Title IV-E funding after covering traditional IV-E expenditures and use it for other child welfare purposes. As a result, the expectation was that TN would act to reduce foster care expenditures in ways that improve outcomes for children and families. By making programmatic changes and investing flexible funds, TN could potentially reduce the length of stay in foster care, reduce reentry, and reduce the use of high-cost placements. The savings generated as a result of the Waiver are meant to be reinvested in child welfare services other than foster care, resulting in a continued decline in the need for foster care.

To explore these changes, the central task of the cost analysis was to create and populate a database including all statewide child welfare expenditures. The TNDCS Cost Study database represents all child welfare-related expenditures for eight full fiscal years. The database's structure contains the flexibility to compare financial data within the state, across fiscal years, and within specific expenditure categories. The fiscal analysis began with a simple categorization of costs into seven major categories and then detail categories are layered on allowing for a more nuanced examination of fiscal trends over time.

The TNDCS Cost Study database was fully populated using information provided to researchers by TNDCS fiscal administrators. Using the data available to date, researchers examined the following dependent variables:

- 1. Total child welfare spending;
- 2. Total foster care expenditures;
- 3. Paid placement days; and

⁴ Brown, C. H., Wang, W., Kellam, S. G., Muthén, B. O., Petras, H., Toyinbo, P., et al. (2008). Methods for testing theory and evaluating impact in randomized field trials: Intent-to-treat analyses for integrating the perspectives of person, place, and time. *Drug and Alcohol Dependence*, *95*, S74–S104.

⁵ Tennessee's fiscal year runs from June through July. For example, state fiscal year 2019 ran from June 2018 through July 2019.

4. Average daily cost of foster care placement (total foster care board and maintenance expenditures divided by paid placement days).

For each dependent variable listed above, we present the indicator across eight fiscal years. Available cost data covers a little more than three years prior to the Waiver and about five years since the Waiver was implemented. An adjustment for inflation has been made to allow comparability of expenditures across years. All expenditures, unless otherwise noted, have been adjusted to real costs using SFY19 dollars as the base year and adjusting previous years' expenditures by the Consumer Price Index (CPI).⁶.

Sampling plan

The nature of the sampling plan varies somewhat depending on the component of the initiative under consideration. The FAST is being implemented statewide; KEEP is now statewide as well, although the depth to which KEEP has penetrated the target population in the later-adopting regions is considerably different than what has been observed in the East Grand Region, the first set of regions to adopt KEEP. NPP is currently being implemented in select regions across the State. For the most part, the sampling plan for the evaluation follows what was previously laid out above, in the section related to the methodology for the outcomes study. That is, for population-level/ITT analyses we will include in the 'treatment condition' the experiences of children in the "treatment" group (children age 0 to 18 across the state who were the subject of a maltreatment report and/or in-home services case; children age 0 to 21 placed in family foster care), giving consideration to whether a given child was already in care when the initiative began or whether a given child was admitted to care in the target counties on or after the date the initiative got underway. We can compare children over time, looking separately at entry cohorts (historical entry cohorts (2010 through 2012) compared to demonstration-period entry cohorts) and in-care groups (historical in-care groups (2010 through 2012) compared to the single demonstration-period in-care group).⁷

Limitations

Of course, in any major evaluation effort there are bound to be obstacles of one sort or another – some foreseeable, others less so. Because of Chapin Hall's long history of working with TNDCS Chapin Hall researchers have, over the years, established strong working relationships with senior staff within Central Office and in many of the regions across the state - staff who tend to be designated as point-people for the implementation of initiatives such as the Waiver demonstration project. However, these individuals are almost always staff who have significant responsibilities outside of coordinating/overseeing the agency's implementation of new initiatives and the relationship with the evaluation team.

⁶ United States Department of Labor. (2020, Feb.). Consumer Price Index. Bureau of Labor Statistics. Retrieved February 17 from http://www.bls.gov/cpi/. Constant costs are calculated using the following equation: Current Year Real Cost = (Base Year CPI/Current Year CPI)*Current Year Nominal Cost. All constant costs are converted into SFY 2019 dollars, so the Base Year is SFY 2019. The CPI for SFY 2019 is calculated by taking the average CPI of the monthly CPIs for the period July 2018 through June 2019.

⁷ When looking for demonstration-specific program effects we can also compare regions to each other during the same (demonstration) time period.

We would also acknowledge key staffing changes within TNDCS during the second half of the demonstration project that introduced a later-stage challenge for the end of the evaluation. The individuals that served as our primary point people, with whom Chapin Hall had established deep working relationships, left the Department prior to the end of the evaluation. Upon their departure, a new set of individuals was identified to serve as TNDCS liaisons to the Chapin Hall team.

TNDCS is, at its heart, a data-driven organization. Chapin Hall is not the only group collecting information from staff across program areas. We have confronted staff evaluation fatigue from time to time. Because leadership at both the regional and state level are aware of the demands being placed on staff, we are often able to work around other data collection efforts to try and avoid fatiguing staff unnecessarily.

Evaluation timeframe and implementation status

Implementation of the evaluation plan followed from the implementation of the initiative.

The FAST was the first component of the demonstration to be rolled out. Initially, Chapin Hall had been releasing implementation and descriptive information about children assessed using the FAST on a quarterly basis. Once TNDCS developed the internal capacity to track FAST completion and utilization, the Chapin Hall team rerouted FAST-related efforts to a consideration of the predictive capacity of the FAST and its impact on admissions.

As for the evaluation of activities related to the implementation of evidence-based models (KEEP and NPP), the evaluation team has collected data since the onset of implementation: nuanced, qualitative data culled from structured interviews and focus groups (KEEP); survey data from case planners and supervisors that has to do with the specific implementation of these models and other relevant issue (KEEP and NPP); fidelity related data (KEEP and NPP); and, implementation data, the source of which is TNDCS' administrative data.

Implementation Study

The Implementation Study set out to address three key research questions:

- 1. To what extent are Waiver strategies implemented with adherence to original Waiver-specific strategic plans?
- 2. To what extent are Waiver strategies implemented with fidelity (following model protocols)?
- 3. How do staff attitudes about child welfare work, their jobs, and Waiver strategies, in particular, shift over the course of the demonstration project?

Data Sources and Data Collection

In this section we detail the full range of data collection activities that have taken place over the course of the demonstration project in service of the implementation study.

Senior Leader Interviews (Fall/Winter 2014; Winter/Spring 2016). For the first set of interviews, Chapin Hall researchers conducted 27 interviews with senior staff from across the East Grand region and Central Office. The interviews covered topics such as the early stages of FAST implementation, perspectives on the investments the Department was planning to make as a part of its Waiver demonstration, and the implementation of evidence-based models. Participants were recruited via email. The majority of the interviews were conducted face-to-face with a few conducted via phone.

Two years later, the evaluation team conducted 35 interviews with senior staff from across the Waiver implementation regions and Central Office. The interviews focused on the implementation of the FAST, Project KEEP and R3. Participants were recruited via email and the interviews were conducted face-to-face whenever possible.

Interviews with FAST Consultants (Fall/Winter 2015). In an effort to gain another perspective on the FAST implementation experience, Chapin Hall interviewed the Vanderbilt Center of Excellence mental health consultants in the majority of the regions where the FAST 2.0 has rolled out. The mental health consultants were chosen because of their unique role in training and supporting staff around the implementation of the FAST and CANS assessment tools. Phone interviews were conducted with 17 consultants during the last week of November and the first week of December. The questions related to the implementation and timing of the FAST; the alignment of FAST scores and case classifications; and, the extent of caregiver substance abuse problems. To ground the discussion, the interviewer presented the consultant with the most recent FAST data for their respective region. The consultants were then asked to reflect on specific aspects of the implementation data.

Interviews with Case-Carrying Staff (Winter/Spring 2016). The evaluation team conducted a series of structured interviews with staff and supervisors to gather data related to the implementation of R3 and Project KEEP. Forty-two frontline staff members from across the East Grand region were invited to participate, as well as 25 supervisors. Multiple email invitations were sent to interview candidates. Senior leadership within the regions were engaged to help boost participation. Ultimately, a total of 56 interviews were completed with frontline staff and supervisors, a response rate of 83 percent.

Focus Groups with Staff. In the Spring of 2017, researchers conducted eight focus groups from across the state, four with supervisors and four with front line staff (six to ten participants in each). The focus groups covered topics related to the implementation of the FAST, perspectives of the FAST over time, the use of the FAST in the development of service plans, and the ability of the FAST to track changes in children and families' well-being.

Interviews with Foster Parents (Spring 2018). The Chapin Hall team conducted interviews with foster parents across Tennessee. The objective was to learn about the experience of KEEP training (from foster parents that participated) as well as to learn about the barriers to participation (from foster parents that could have participated in KEEP training but had not). Recruitment began at the end of February 2018. Interviews were conducted from the end of February through the middle of April 2018. 18 foster parents who attended KEEP and 24 who had not attended KEEP were interviewed; foster parents were from across the state.

General Staff Survey (GSS). The GSS was administered to front line staff and supervisors. The first two administrations of the GSS focused on individuals within the 10 target counties across the East Grand region. The third administration of the GSS included front line staff and supervisors across the state.

The first administration of the GSS (GSS1) occurred in July 2015; a total of 217 staff members participated, representing an overall response rate of 65 percent. The GSS2 was administered in January 2017; a total of 291 staff members participated in the GSS2, representing an overall response rate of 79 percent. The third administration of the GSS (GSS3) occurred in March/April 2019. A total of 1,090 participated in the GSS3, representing an overall response rate of 57 percent.

Across all three administrations of the GSS we observed significant regional variation in staff participation. GSS1 response rates varied from 47 percent to 89 percent; for GSS2, response rates varied from 75 percent to 81 percent. GSS3 response rates varied from 36 percent to 75 percent.

Recruitment methods for all three administrations of the GSS were essentially the same The Chapin Hall team coordinated the data collection effort with TNDCS and regional leadership. Staff were given ample time to respond to the survey (about three weeks), with multiple reminders sent out during that period.

Implementation of FAST. The evaluation team used TNDCS' administrative data, TFACTS, to assess the extent to which staff are completing the FAST for eligible children: those who are the subject of a maltreatment investigation or "assessment" (for families who go down the alternate response track).

Implementation of NPP. The evaluation team also used TNDCS' administrative data in tandem with a database developed by Chapin Hall, to track the extent to which eligible families were referred for NPP, per protocols.

Implementation of KEEP. Using both TFACTS and FIDO, the program fidelity monitoring system developed by the model purveyor (ODI), Chapin Hall tracked the extent to which children eligible for KEEP were able to participate, by virtue of their being placed in a foster home with a KEEP-trained caregiver.

Documentation review. Since the onset of the demonstration project, Chapin Hall staff have been reviewing planning materials, such as background information related to KEEP and R3; documentation related to the development and scoring of the FAST; and, background materials on NPP. The overarching purpose of this review was to clarify the intervention parameters and to assist TNDCS with the development of both the fidelity monitoring and evaluation strategies.

In the following section we discuss the findings-to-date as they relate to the Implementation Study. We focus here on implementation data collected after the submission of the Interim Evaluation Report.

FAST

Our goal in this section is threefold: (1) to discuss how front line staff and supervisors use the FAST to inform service planning and as an aid when thinking about children and families' well-being, (2) to review FAST compliance (are workers completing a FAST for eligible children, within desired timeframes, and in alignment with case classifications?) and (3) to review FAST "findings" with respect to the presence of actionable needs in areas of particular importance for children at risk of being placed into out-of-home care.

Use of the FAST in Practice

Over the first half of the Waiver period the evaluation team learned a considerable amount about FAST completion (the physical act of completing the FAST and entering data into TFACTS), about FAST scores and risk ratings, and about the relationship between FAST scores and case classifications. Early in the second half of the Waiver period – about 1½ to 2 years after the FAST was first implemented – the focus shifted to learning more about staff's motivation to use the FAST in the intended ways: namely, to inform the development of individualized service plans and track changes in functional well-being for children receiving non-custodial services.

In the Spring of 2017, the evaluation team conducted focus groups in the Shelby, Northwest and South Central regions. The target population was front line staff (CPS-I, CPS-A, FSS and FCIP) and supervisors (TL's). Focus groups were held separately for a randomly selected group of front-line staff and supervisors. One focus group for front line staff and one for supervisors was conducted in each region. Depending on the volume of staff within each region and the extent to which an early thematic consensus emerged in the data, we left open the possibility for scheduling additional focus groups.

The following paragraphs summarize the key take-aways from this series of focus groups.

FAST and Service Planning. While the child/family needs indicated on the FAST are often the ones addressed in the case service plan, the majority of front-line staff said the FAST has not impacted how they develop service plans. One staff member stated, "I am giving information to the FAST, it is not giving information to me." The staff said they will think about the components of the FAST while they are writing the service plan but do not consider the FAST score when making decisions in the development of the service plan. However, it was noted on at least one occasion that the FAST may be a good tool for new staff, to orient them to the priority topics when making initial assessments of family members. Focus group participants reported that staff who have field experience, though, do not need the FAST in the same way.

None of the front-line staff who participated in the focus groups stated they use the FAST *to drive the development* of service plans. If anything, staff discussed having adjusted their FAST scores so that it would be align with the work they were already planning to do with the family.

Supervisors, however, held a different perspective. "[The] FAST is a good roadmap to develop the plan," one supervisor said. Supervisors across program areas noted that the FAST helps front-line staff pay attention to attributes of the case they may not have otherwise noticed. Interestingly, when asked pointedly, supervisors from one of the regions said they believe the staff they supervise are using the FAST this way. Supervisors from the other two regions held a different view. They described the FAST as a "chore," rather than something that informs the service plan. These supervisors reported that staff know what they are going to do with the case before they complete the FAST. In other words, the FAST does not drive service planning. Indeed, supervisors told of the need to sometimes change the FAST score after the service plan is developed so that it aligns with the service plan.

All four supervisor focus groups mentioned that the timeframe for the FAST makes it difficult to complete the FAST well. It often it takes several days to find the family; once found, family members may not be willing to have an in-depth conversation about their problems, making it difficult to accurate score the FAST. Participants in two of the supervisor groups said their staff score the FAST using information from the referral or the case history; it's the only way they can get the FAST completed on time.

Attitudes about FAST. Here, the question had to do with a consistent finding from the field of implementation science that sometimes, when new tools are introduced, staff may see their value right away and use those tools enthusiastically. Or, staff may not initially see the value of a new tool and only use the tool to be compliant with policy. It often happens that attitudes about new policies and practices shift over time – sometimes in a more positive direction, sometimes in the opposite direction. One of the objectives of the focus groups was to understand attitudes toward FAST implementation, considering that attitudes often change over time.

Overall, this line of questioning did not gain much traction with staff – neither front-line staff nor supervisors. What did come out is that when the FAST was initially rolled out, staff were told that the FAST would replace an existing requirement – not be an add-on. However, at the time these focus groups were conducted (Spring 2017) staff reported that they were still required to do the "old" assessment as well as the FAST; that is, no pre-existing requirements had been decommissioned.

FAST Ratings and Casework. During the first 1½ to 2 years of implementation, Chapin Hall analyzed FAST data every three months or so. The evaluation team was interested in how the FAST was being scored and how FAST scores corresponded with case classifications, amongst other topics. During that period, the evaluation team noticed that cases with a FAST rating of 'No Services Needed' often had a case classification indicating services *were* needed – that services were either offered and accepted, offered and refused, or required. Focus group participants were asked to reflect on those findings. Further, participants were asked to consider whether they see the case management they provide as a "service."

Focus group participants explained that if staff rate an issue as actionable (a score of 2 or 3), they have to provide a written justification in the FAST. Staff consistently referenced needing "proof" for the justification section if they scored the family as needing services, particularly for mental health or substance use. However, at the very early stages of a case (the FAST is to be submitted

within 10 days of the case start), such "proof" can be difficult to come by. This often leads to a mismatch: a low risk rating on the FAST, but a dispositional response to the case that suggests a service need.

Indeed, workers (front-line staff and supervisors) in all of the groups discussed situations where they may think the parents need substance abuse education/services, parenting support, conflict management, or other services, but the need is not high enough to score as "Services Needed" on the FAST because the children do not appear to be at risk of harm. So, the norm becomes to score such items as unactionable, so long as children do not appear to be negatively affected by the parent's behavior. However, when prompted to determine a disposition for the case, workers will often select a "Service" option, so that families can get help – even absent imminent risk of harm.

In general, focus group participants reported that they do consider the work they do to be "a service." However, a distinction was made between the service provided by TNDCS workers and the service provided by contracted workers: the former provides monitoring and overall case management; the latter does something more therapeutic.

Substance Abuse. Over time, the evaluation team had heard a lot about parental substance abuse and parental mental health issues across Tennessee; however, we do not see evidence of either of these in the FAST. Focus group participants were asked to comment on this discrepancy. In every group the staff discussed the timing of the FAST (10 days) versus the timing of the case classification/disposition (30 days). Since the FAST has to be completed quickly, staff often have not had time to establish a relationship with family members; in fact, sometimes staff have not yet had the chance to even meet parents by the time the FAST is due. However, by the time the case needs to be classified staff are more likely to have established some kind of relationship with family members, and to know a lot more about the case. Thus, the discrepancy in FAST scores and case classifications.

Again, in each group there was a lot of discussion around the scoring of the FAST. Staff repeatedly stated that if the issue is not impacting parenting they are instructed to score it as a 1 ("Watchful Waiting"), which does not indicate services are needed. They also reiterated the policy of having to justify any rating of 2 or 3 ("Action Needed" or "Immediate Action Needed"), which they are not comfortable doing unless they have "proof" of the issue.

Clinical Preparedness. The FAST covers topic areas such as adjustment to trauma, traumatic grief, substance abuse and mental health. Staff were asked to comment on how well prepared they are to answer these types of questions. In general, focus group participants said they felt adequately trained to answer questions on the FAST related to trauma, traumatic grief, substance abuse and mental health. Several staff referenced attending trainings related to these topics, but the majority of staff referenced their experience as the source of their preparation. They said things such as, "I have been doing this a long time."

At the same time, the staff spoke of not scoring a 2 or a 3 on any of the items unless they could "prove" there was an issue. For example, if they suspected a client's symptoms may indicate a clinical diagnosis, they were still not willing to score above a 1 ("Watchful Waiting") without proof or third-party documentation. In two of the groups staff mentioned they do not have the clinical background to score any mental health item higher than a 1 ("Watchful Waiting").

Supervisors reiterated that the timing of the FAST – the quick turnaround – makes it difficult to explore issues of trauma and traumatic grief. There just isn't enough time to establish a therapeutic rapport with people to make those kinds of questions appropriate.

Well-Being Over Time. During the focus groups, staff were asked the extent to which they see the FAST as an intervention that can help them track changes (positive or negative) in the functional well-being of children and their caregivers over time. None of the front-line focus groups participants said they use the FAST in this way. In several groups, staff discussed the notion that the closing FAST should show improvement from the initial FAST. Staff agreed this is often not the case, because they know so much more about the family when they are closing the FAST than they do at the initial FAST.

Compliance

In this section we answer the following questions as it relates to compliance with FAST guidelines:

- 1. To what extent are children who are eligible for a FAST having at least one completed on their behalf?
- 2. To what extent are children who are eligible to be assessed using the FAST having a FAST completed within desired timeframes, allowing for the integration of the assessment information into decisions around services?
- 3. To what extent do FAST scores (level of service need) correspond with case classification decisions?

We address the first question in Figure 3, below.

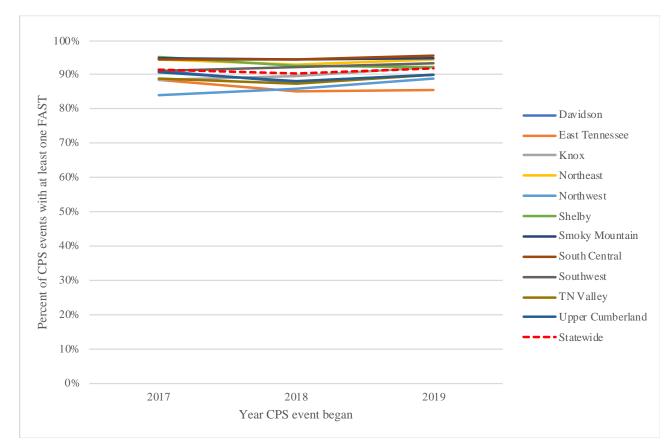
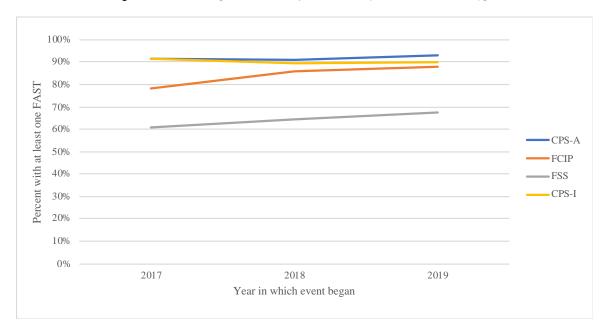


Figure 3. FAST completion, by Region (previous 12 months)

Figure 3 displays the extent to which children who were the subject of a CPS event have at least one FAST completed on their behalf. The figure reflects the period from January 1, 2017 through September 30, 2019: the second half of the Waiver demonstration period. Completion rates range from about 85 to 95 percent.

Figure 4 provides a different view: implementation levels over the second half of the Waiver period, broken down by case type rather than by region.

Figure 4. Implementation of the FAST, by Month and Case Type



Generally, the rate of FAST completion for CPS cases is hovering around 90 percent. FSS cases are the least likely to have a FAST administered (between 60 to 70 percent); FCIP cases have become more likely over the second half of the Waiver period to have a FAST completed, from less than 80 percent in 2017 to nearly 90 percent by the end of the Waiver period.

In Figure 5 we look at the extent to which FASTs are being completed in line with policy.

100%
90%
80%
70%
60%
40%
30%
20%
10%
0%
FAST completed within 0-30 days of case start

FAST completed within 10 days of case start

Figure 5. Timing of FAST Completion, by Region

Across regions, we see that the majority of FAST assessments are being completed within the desired time frames (within 10 business days of the event start date).

There remains the question of whether FAST assessments are factoring into case decisions in the manner intended and as articulated in the theory of change. The evaluation has been considering the question from two angles. One is through conversations with frontline staff and supervisors, where we ask this question directly. We presented that qualitative data in a previous section. Another way to think about this is to compare FAST assessments (the level of service need, as indicated by the FAST score) with case classifications and look to see evidence of alignment between FAST scores and case classifications. In Table 1 we provide this view, separately for CPS-A and CPS-I cases.

Table 1. Distribution Across Classification Types, by FAST service rating: CPS-A Cases Only⁸

	Services Accepted	Services Not Needed	Services Refused	Services Required	Sub- stantiated	Unsub- stantiated	Total
High Need/Risk	1999	4601	332	1621	1	10429	18983
Minimal Need/Risk	340	1369	74	48	0	920	2751
Moderate Need/Risk	5725	17651	974	1753	2	18563	44668
No Need/Risk	5982	55425	1386	706	0	19626	83125
Not Determined	0	4	0	0	0	0	4
	Percent						
High Need/Risk	11%	24%	2%	9%	0%	55%	100%
Minimal Need/Risk	12%	50%	3%	2%	0%	33%	100%
Moderate Need/Risk	13%	40%	2%	4%	0%	42%	100%
No Need/Risk	7%	67%	2%	1%	0%	24%	100%
Not Determined	0%	100%	0%	0%	0%	0%	100%

Many cases that start off as CPS-A cases appear to be closing as formal investigations, with dispositions that are typically reserved for investigations (i.e., Substantiated and Unsubstantiated). Indeed, the higher the assessed risk/need for services, the more likely it is that the case will have an investigation-type disposition. A noticeable proportion of high and moderate risk cases have a disposition of "Services Not Needed": 24 percent and 40 percent, respectively.

Table 2 gives the picture for CPS-I cases (traditional investigations).

⁸ UNSUB refers to unsubstantiated, a designation typically used in the context of investigations (not CPS-A cases). However, a small portion of CPS-A events are given this designation, which is actually a composite of other, largely administration classifications. It does not necessarily speak to cases that moved from the CPS-A track to the traditional investigative track.

Table 2. Distribution Across Classification Types, by FAST service rating: CPS-I Only

	Services Accepted	Services Not Needed	Services Refused	Services Required	Sub- stantiated	Unsub- stantiated	Total
High Need/Risk	2	6	0	1	6539	4374	10922
Minimal Need/Risk	0	3	0	0	100	756	859
Moderate Need/Risk	7	12	1	4	9224	16873	26121
No Need/Risk	5	35	2	1	5495	42474	48012
				Percent			
High Need/Risk	0%	0%	0%	0%	60%	40%	100%
Minimal Need/Risk	0%	0%	0%	0%	12%	88%	100%
Moderate Need/Risk	0%	0%	0%	0%	35%	65%	100%
No Need/Risk	0%	0%	0%	0%	11%	88%	100%

As expected, investigations with a higher risk rating are more likely to be substantiated. The reverse is true: investigations with a lower risk rating are more likely to be unsubstantiated.

FAST "Findings"

Broadly, the FAST has two main purposes. The first purpose of the FAST is to inform service planning. It is a tool for workers to help them detect areas where children and caregivers need support and the immediacy or urgency of the need. The second purpose of the FAST is to track changes in child and caregiver functioning over time. Because the FAST is expected to be completed upon initiation of non-custodial services and at regular intervals thereafter, there is the capacity to collect multiple data points on a given child/family, to see the extent to which progress is made in identified need areas. Looking at FAST scores in the aggregate – for example, looking at the set of FAST scores from all children's initial FAST – can go a long way to help child welfare administrators understand the needs of children and families and to make sure that investments in improving the quality of care are properly targeted.

The figure below gives a snapshot of how children and caregivers receiving non-custodial services are doing in the following key areas: caregiver supervision, family safety, caregiver knowledge of child and family needs, family conflict, and discipline. We focus on these items because they are a part of the process by which eligibility for NPP is determined. The focus is on FASTs associated with CPS or other non-custodial events that occurred between January 1, 2017 and September 30, 2019.

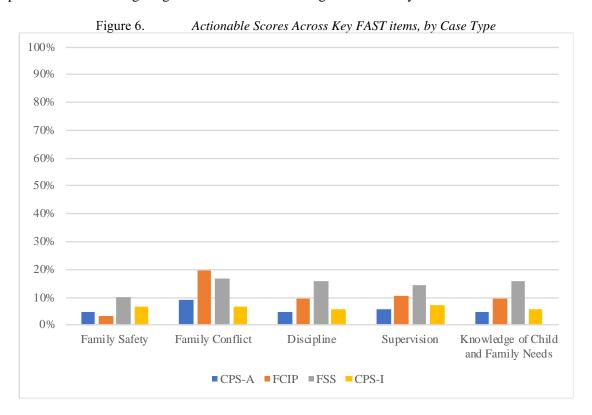
Family Safety. The family safety item on the FAST gauges the extent to which children are considered safe in the home, with "safety" considered in fairly broad terms; that is, there is no specific mention to the type of injury (emotional, physical, etc.) a child could be at risk of incurring.

Discipline. This item on the FAST has to do with the kinds of discipline practices parents use; parents who score in the actionable range have a difficult time setting appropriate limits, may use harsh disciplinary techniques, and may have unrealistic expectations of their children.

Supervision. This item on the FAST has to do with ensuring age-appropriate supervision of children. Actionable scores are appropriate for caregivers who consistently demonstrate an inability to provide supervision for their children in line with their needs, given their age and/or development.

Caregiver Knowledge of Child and Family Needs. This item on the FAST gauges the extent to which caregivers understand the needs of their children/family. It is fairly non-specific; "needs" and "knowledge" are very broad constructs that are not specifically defined in this context.

Family Conflict. This item on the FAST has to do with how much fighting and arguing takes place in the home. Actionable scores are given in situations where fighting and/or arguing is persistent or where fighting becomes violent and dangerous to family members.



FAST: Summary

Compliance with FAST regulations has been very high – both across regions and over time. A solid majority (over 90 percent) of children are having at least one FAST completed on their behalf; 80 to 90 percent of the children for whom a FAST is completed are having one completed within the first 10 business days after a case is initiated.

Most caregivers assessed using the FAST are not scored in the actionable range in any of the major domains presented here. The Family Conflict item was the most likely to be scored in the actionable range; the Family Safety item was the least likely. Workers seem more comfortable relying on the score that suggests either a history of a problem or the suspicion of a problem, rather than the scores that indicate a moderate-to-severe level of the problem. Whether this is because caregivers receiving non-custodial services truly do not have moderate to severe problems associated with these five areas (discipline, supervision, family safety, developmental, and knowledge of needs), at least as described by the FAST, or because workers need additional training to be able to identify these issues is unclear.

KEEP

In this section we look at findings related to KEEP, focusing on interviews conducted with foster parents and implementation data that speaks to the extent to which KEEP has penetrated its intended target population.

Foster parents and KEEP

Between February and April of 2018, the Chapin Hall team conducted interviews with foster parents across Tennessee. The objective was to learn about the experience of KEEP training (from foster parents that participated) as well as to learn about the barriers to participation (from foster parents that could have participated in KEEP training but had not).

In this section we summarize our methods for engaging foster parents in an interview and the main take-aways from those interviews.

Recruitment and Sample. The Chapin Hall team created a 3-minute recruitment video and posted it on YouTube. Foster parent support workers in KEEP regions were sent the link to the video and were asked to share the link with the foster parents on their caseloads. The video directed foster parents to an online site where they could indicate their willingness to participate in an interview with a member of the Chapin Hall team and their preferred time and method of initial contact (i.e., phone call, email, or text message).

Recruitment began at the end of February 2018. Interviews were conducted from the end of February through the middle of April 2018.

18 foster parents who attended KEEP and 24 who had not attended KEEP were interviewed; foster parents were from across the state.

Feedback on KEEP. The foster parents who had not attended KEEP were asked:

- Have you had any children ages 4-12 in your care in the past two years?
- Have you been invited to attend KEEP?
- If you have and did not attend, why haven't you attended?

Of the 24 foster parents that participated in an interview and had not attended KEEP, 15 of them have had children between the ages of 4 to 12 in their home within the past two years; the remaining nine foster parents had not. Of the 15 foster parents that have had children age 4 to 12 in their home within the past two years who had not yet completed KEEP training:

- Six of them had never heard of KEEP
- One was currently enrolled in KEEP
- Eight said they would be interested in participating KEEP training but were not able to attend either because of the location of the training, a conflict with the training schedule, or because they were new to foster care and had to complete core training first.

The foster parents that did attend KEEP were asked the following questions:

KEEP is a program that teaches foster parents strategies for managing children's problem behaviors. From your perspective, has being trained in KEEP had an impact on the way you parent the children in your home? If it has, how so? If not, why do you think that is?

Respondents overwhelmingly said that KEEP had a positive impact on their parenting. KEEP has helped them understand the complexities of the problem behaviors children exhibit in their homes, has provided them with alternative ideas for how to encourage (and discipline) children, and has given them tools for remaining calm in the face of parenting challenges. Specifically, respondents talked about using KEEP techniques to reduce tension in the home, to help quell arguing, to approach a wide range of challenges with children, and to bring down their own stress levels before reacting to difficult situations.

A couple of KEEP-trained foster parents reported that KEEP training has not reduced their stress. An additional respondent made the distinction between stress reduction in response to children's problematic behaviors (KEEP helped with this) and stress reduction in response to difficult situations involving biological parents (KEEP reportedly did not help with this).

With better-managed behavior and lower stress levels for foster parents, we might expect children who live in KEEP-certified homes to experience a reduced or at least stabilized behavior problems, be it at home or at school. Have you observed this in the foster child(ren) in your homes?

The majority of the respondents reported improvements in children's behavior since they participated in KEEP training, either at home and/or at school.

KEEP training seems to have two main components: content (what you learn, such as new strategies and techniques for managing behavior problems and the stress you may feel in response to those behavior problems) and support, by way of talking with other individuals who are going through a similar experience. Out of 100%, what percentage of these two components of KEEP training was the most useful? For example, if you think the content and the support of other foster parents were equally useful you may say '50/50'. If you think the content was a bit more useful you may say '60/40'.

The interview respondents spoke highly of both the content of KEEP as well as the support function it serves. On average, support was deemed a bit more important than content by a small margin (56/44).

Thinking just about the content of KEEP, was there a part of the curriculum that had a particular impact on the way you parent your children? Explain.

Several components of the KEEP curriculum stood out for parents, such as:

- Anger Mountain: a realization that sometimes parents go up Anger Mountain and that they do not have to.
- Slow down and take a break: few behavior problems/issues have to be addressed immediately. Generally, it is okay to take a few minutes to slow down and make a plan.
- Chart it out: Several respondents mentioned the positive impact 'charting' has had on their children.

• Catch them doing something good: This is another technique that resonated with the KEEP participants with whom we spoke. Rather than only noticing when children misbehave, make a point to "catch" them behaving appropriately – and let them know it.

Limitations. We would be remiss if we didn't underscore the fact that the number of foster parents with whom we spoke represents a very small fraction of the foster parents with whom we *could have* spoken. The foster parents who participated in an interview with a member of the evaluation team volunteered to do so. Many other foster parents were given the opportunity but declined to speak with us. That is, this is a non-random sample of foster parents. The potential for bias is fairly high.

Summary. Overall, the foster parents who participated in KEEP training and who volunteered to speak with a member of the evaluation team spoke very highly of KEEP training. The content of KEEP training and the support element of the program were each assigned near-equal value by those foster parents who both participated in KEEP training and participated in an interview. There appear to be three main explanations for why otherwise eligible foster parents are not participating in KEEP: because of existing training requirements, logistics (time/location don't work), or a lack of knowledge about KEEP. To the extent the evidence suggests ongoing opportunities for Department staff to engage eligible foster parents in KEEP, keeping these three factors in mind could help in those efforts.

KEEP Implementation: Time 1 and Time 2

Time 1: Fall 2017

In the Fall of 2017, Chapin Hall issued a Time 1 report on KEEP implementation. The question being addressed in this section has to do with the extent to which children ever participated in KEEP, by virtue of being placed in a KEEP-trained foster home. Participation in KEEP has to do with the qualification (training) of the foster parents: children who spend time in a foster home in which the caregivers received KEEP training – either before the child's placement in their home or during their placement in the home – are considered to have "participated" in KEEP.

At the time of this analysis, only the four regions of the East Grand Region were offering KEEP training to DCS-licensed foster parents. The target population includes children who were placed in DCS-licensed foster homes physically located within the East Grand Region during the KEEP period, who were between the ages of 4 and 12 years.

The "go live" date for Northeast and Smoky Mountain regions was set at July 22, 2015. The "go live" date for the East Tennessee and Knox regions was set at September 25, 2015.

Methodology. First, the FIDO database was cleaned and prepared for linkage with the relevant TFACTS tables. Next, the Chapin Hall foster parent spell file (derived from TFACTS tables) was linked with a special TFACTS database that links various foster home IDs. This linked file was then joined with FIDO. Separately, a child spell file (developed by Chapin Hall, derived from TFACTS tables) was linked with an event file (also developed by Chapin Hall). This allowed us to note each placement a child experienced during their spell. Lastly, the child spell/event file was joined with the FIDO file, with necessary IDs in place. At this point, the file contains all of the raw information need for the analysis in a single database.

Foster parents. The first view of implementation we considered had to do with foster parent training, the question being, "To what extent did foster parents (at least one foster parent from unique foster homes) eligible to participate in KEEP training actually participate in the training?"

Table 3. Volume of DCS-Licensed Homes in East Grand Region (Time 1)

			0 1						
		Physical Location of Foster Homes							
	East		Smoky						
DCS-Licensed?	Tennessee Knox Northeast Mountain T								
No (Private Provider-Licensed Home)	200	269	311	254	1,034				
Yes (DCS-Licensed Home)	235	330	432	362	1,359				
Total	435	599	743	616	2,393				
			Percent						
No	19%	26%	30%	25%	100%				
Yes	17%	24%	32%	27%	100%				
Total	18%	25%	31%	26%	100%				

Of the 2,393 homes that were open at the time KEEP implementation began, just over half of them (n=1,359) were identified as DCS-licensed homes.

Table 4. DCS-Licensed Homes and Age Requirement (Time 1)

•	Physical Location of Foster Homes								
Met Child Age Requirement	East Tennessee	Knox	Northeast	Smoky Mountain	Total				
No	99	135	187	164	585				
Yes	136	195	245	198	774				
Grand Total	235	330	432	362	1,359				
			Percent						
No	42%	41%	43%	45%	43%				
Yes	58%	59%	57%	55%	57%				
Total	100%	100%	100%	100%	100%				

Of the 1,359 homes that met the basic criteria for KEEP eligibility (physically located in the East Grand region, DCS-licensed, open during the KEEP period), 774 had at least one target-age child in the home during the relevant period (while KEEP was operational).

Table 5. Participation in KEEP Training, by Region (Time 1)

Table 3. Tarrierp	anon in REEL Trai	ning, by Region (Time 1	/				
	Participation in KEEP Training						
Physical Location of Foster Home	No	Yes	Total				
East Tennessee	112	24	136				
Knox	162	33	195				
Northeast	188	57	245				
Smoky Mountain	153	45	198				
Total	615	159	774				
		Percent					
East Tennessee	82%	18%	100%				
Knox	83%	17%	100%				
Northeast	77%	23%	100%				
Smoky Mountain	77%	23%	100%				
Total	79%	21%	100%				

Participation in KEEP training is defined as having started KEEP training. Foster parents need not have completed the training in order to be counted here.

Of the 774 foster homes that would have been eligible to participate in KEEP training, 159 homes (21 percent) sent at least one foster parent to KEEP training.

The last view we offer has to do with the experience level of foster parents who opt to participate in KEEP training. We define experience level as the number of foster children placed in the home prior to the commencement of KEEP training. Table 6 has the details.

Table 6. Participation in KEEP Training, by Prior Placements (Time 1)

		1 to 3	4 to 5	6+	
	0 placements	placements	placements	placements	Total
No KEEP	300	158	44	114	616
Yes KEEP	47	47 36 23		53	159
Total	347	194	67	167	775
			Percent		
No KEEP	49%	26%	7%	19%	100%
Yes KEEP	30%	23%	14%	33%	100%
Total	45%	25%	9%	22%	100%

If we think about the group of foster parents coming for KEEP training, we can say that just under one-third of them are brand new, with no children having been placed in their homes. The majority of foster parents participating in KEEP training have had several children placed in their home already.

Children. The second view we offer uses children as the unit of analysis, rather than foster homes.

Table 12 displays the extent to which children who were eligible to "participate" in KEEP did so at Time 1, by region. To review, children were eligible to participate in KEEP if they were placed in a DCS-licensed home in one of the East Grand regions on or after the date KEEP went live, and if they were within the target age range at any point during that period (age 4 to 12 years).

Table 7. Participation in KEEP, by Region (Eligible Children Only)

	Participated in KEEP					
Child's Assigned Region	No	Yes	Total			
East Tennessee	224	67	291			
Knox	327	93	420			
Northeast	317	202	519			
Smoky Mountain	310	161	471			
Total	1,178	523	1,701			
		Percent				
East Tennessee	77%	23%	100%			
Knox	78%	22%	100%			
Northeast	61%	39%	100%			
Smoky Mountain	66%	34%	100%			
Total	69%	31%	100%			

At Time 1 we found that participation in KEEP varied by region. Children who were eligible for KEEP and assigned to Northeast and Smoky Mountain regions were more likely to participate in KEEP (i.e., spend time in a DCS-licensed home with a foster parent that attended some amount of KEEP training) than eligible children assigned to East TN or Knox regions.

Table 13 takes a closer look at the extent to which eligible children were touched by KEEP ("participated"), broken out both by region as well as the time from the start of their spell to their first encounter with KEEP.

Table 8. Time to KEEP participation, by region

-	1 4010 0, 11.	We to HEEL P	arricipation, e	7 . 68.611							
		Time from start of spell to KEEP participation									
Child's Assigned Region	0 to 3 months	4 to 6 months	7 to 12 months	13+ months	None to Date	Total					
East Tennessee	24	14	17	12	224	291					
Knox	31	15	22	25	327	420					
Northeast	99	16	24	63	317	519					
Smoky Mountain	79	13	22	47	310	471					
Total	233	58	85	147	1,178	1,701					
			Per	cent							
East Tennessee	8%	5%	6%	4%	77%	100%					
Knox	7%	4%	5%	6%	78%	100%					
Northeast	19%	3%	5%	12%	61%	100%					
Smoky Mountain	17%	3%	5%	10%	66%	100%					
Total	14%	3%	5%	9%	69%	100%					

At the Time 1 investigation into the implementation of KEEP, Northeast and Smoky Mountain were doing a better job than East TN and Knox of getting newly admitted kids into KEEP trained homes.

Time 2: Fall 2019

By this point, KEEP has been rolled out across the state, as follows:

- Northeast and Smoky Mountain: July 22, 2015 (4+ years)
- East TN and Knox: September 25, 2015 (4 years)
- South Central, Mid Cumberland, and Davidson: March 3, 2017 (3.5 years)
- Southwest, Northwest, and Shelby: April 13, 2018 (~1.5 years)
- TN Valley and Upper Cumberland: August 31, 2018 (1 year)

The dates associated with each set of regions represents the date after which KEEP would be considered operational, meaning KEEP groups could have theoretically commenced. In parentheses you see the amount of time available to observe the implementation of KEEP, given the date evaluation activities ceased (October 1, 2019).

We will lay out the Time 2 information in the same way we displayed the Time 1 information.

Foster parents. We start with foster parents, considering the question, to what extent were eligible foster homes trained in KEEP? We then move on to children, considering the question, to what extent were eligible children exposed to KEEP-trained foster parents?

Table 9. Open, DCS-licensed foster homes during KEEP period, by Region (Time 2)

		Physical Location of Foster Homes											
				Mid		North-		Smoky	South	South-		Upper	
DCS-Licensed	Davidson	East TN	Knox	Cumb.	Northeast	west	Shelby	Mt.	Central	west	TN Valley	Cumb.	Total
Yes	417	568	608	662	779	318	349	602	470	173	291	326	5563
No	156	253	314	432	343	62	280	304	230	192	234	72	2872
Total	573	821	922	1094	1122	380	629	906	700	365	525	398	8435
							Percent						
Yes	7%	10%	11%	12%	14%	6%	6%	11%	8%	3%	5%	6%	100%
No	5%	9%	11%	15%	12%	2%	10%	11%	8%	7%	8%	3%	100%
Total	7%	10%	11%	13%	13%	5%	7%	11%	8%	4%	6%	5%	100%

Of the nearly 36,000 foster homes included in the foster parent spell file, 8,435 of them were open at the time KEEP training began in the region. Some of these may have opened after KEEP was rolled-out. Northeast had the greatest number of open homes at the time KEEP training began; Northwest had the smallest number. Of these, about 66 percent (n=5,563) were identified as DCS-licensed homes.

Table 10. Open, DCS-licensed foster homes during KEEP period that also met the age requirement, by Region (Time 2)

		Physical Location of Foster Homes											
Met Child Age Requirement	Davidson	East TN	Knox	Mid Cumb.	Northeast	North- west	Shelby	Smoky Mt.	South Central	South- west	TN Valley	Upper Cumb.	Total
No	248	237	254	300	310	149	190	224	179	62	145	138	2436
Yes	169	331	354	362	469	169	159	378	291	111	146	188	3127
Total	417	568	608	662	779	318	349	602	470	173	291	326	5563
							Percent						
No	59%	42%	42%	45%	40%	47%	54%	37%	38%	36%	50%	42%	44%
Yes	41%	58%	58%	55%	60%	53%	46%	63%	62%	64%	50%	58%	56%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Of the 5,563 homes that met the basic criteria for KEEP eligibility (DCS-licensed, open during the KEEP period), 3,127 (about 56 percent) had at least one target-age child in the home during the relevant period. This is a similar proportion to what was observed for just the East Grand Region, at Time 1.

Table 11. Participation in KEEP training, by Region

	Participation in KEEP Training						
Physical Location of Foster Home	N.T.	X 7	7F. 4 I				
	No	Yes	Total				
Davidson	158	. 11	169				
East Tennessee	304	27	331				
Knox	303	51	354				
Mid Cumberland	355	7	362				
Northeast	393	76	469				
Northwest	159	10	169				
Shelby	145	14	159				
Smoky Mountain	333	45	378				
South Central	287	4	291				
Southwest	103	8	111				
TN Valley	142	4	146				
Upper Cumberland	184	4	188				
Total	2866	261	3127				
		Percent					
Davidson	93%	7%	100%				
East Tennessee	92%	8%	100%				
Knox	86%	14%	100%				
Mid Cumberland	98%	2%	100%				
Northeast	84%	16%	100%				
Northwest	94%	6%	100%				
Shelby	91%	9%	100%				
Smoky Mountain	88%	12%	100%				
South Central	99%	1%	100%				
Southwest	93%	7%	100%				
TN Valley	97%	3%	100%				
Upper Cumberland	98%	2%	100%				
Total	92%	8%	100%				

At Time 1, about 21 percent of eligible foster homes across the East Grand Region had sent at least one foster parent to KEEP training. At Time 2, that rate has slipped considerably: only 8 percent of eligible foster homes across the State have sent at least one foster parent to KEEP

training. Rates slipped for the regions in the East Grand region as well – the regions that had the most time to implement the program.

Finally, we present Time 2 findings as they relate to when in the trajectory of the foster home KEEP is likely to be introduced.

Table 12. Participation in KEEP training, by prior placements (Time 2)

	0 placements	1 to 3 placements	4 to 6 placements	7+ placements	Total
No KEEP	1804	541	191	330	2866
Yes KEEP	111	52	30	68	261
Total	1915	593	221	398	3127
			Percent		
No KEEP	63%	19%	7%	12%	100%
Yes KEEP	43%	20%	11%	26%	100%
Total	61%	19%	7%	13%	100%

The group of foster parents coming to KEEP training is fairly mixed, with many brand new foster parents (43 percent of participants have not yet had placements in their home) and many veteran foster parents (37 percent have had 4 or more placements by the time KEEP training began).

Children. The second view we offer uses children as the unit of analysis, rather than foster homes. Here we seek to answer the question, to what extent were eligible children exposed to KEEP, by virtue of having spent time in a KEEP-trained foster home?

Table 13 displays the extent to which children who were eligible to "participate" in KEEP did so at Time 1, by region. To review, children were eligible to participate in KEEP if they were placed in a DCS-licensed home in one of the East Grand regions on or after the date KEEP went live, and if they were within the target age range at any point during that period (age 4 to 12 years).

Table 13. Participation in KEEP, by Region (Eligible Children Only)

Region	No KEEP	Received KEEP	Total eligible
Davidson	245	91	336
East Tennessee	542	146	688
Knox	610	155	765
Mid Cumberland	597	35	632
Northeast	664	243	907
Northwest	278	22	300
Shelby	293	24	317
Smoky Mountain	693	219	912
South Central	560	17	577
Southwest	192	12	204
TN Valley	263	20	283
Upper Cumberland	375	16	391
Total	5312	1000	6312
		Percent	
Davidson	73%	27%	100%
East Tennessee	79%	21%	100%
Knox	80%	20%	100%
Mid Cumberland	94%	6%	100%
Northeast	73%	27%	100%
Northwest	93%	7%	100%
Shelby	92%	8%	100%
Smoky Mountain	76%	24%	100%
South Central	97%	3%	100%
Southwest	94%	6%	100%
TN Valley	93%	7%	100%
Upper Cumberland	96%	4%	100%
Total	84%	16%	100%

KEEP implementation continues to vary widely by region. Children who were eligible for KEEP and assigned to Davidson, Northeast and Smoky Mountain regions were more likely to participate in KEEP (i.e., spend time in a DCS-licensed home with a foster parent that attended some amount of KEEP training) than eligible children assigned to other regions in the state. Children assigned to South Central and Upper Cumberland were the least likely to have contact with the KEEP program.

Table 14 takes a closer look at the extent to which eligible children were touched by KEEP ("participated"), broken out both by region as well as the time from the start of their spell to their first encounter with KEEP.

Table 14. Time to KEEP participation, by region

Region	0 to 3 months	4 to 6 months	7 to 12 months	13+ months	None to date	Total				
Davidson	58	3	4	26	245	336				
East Tennessee	99	13	19	15	542	688				
Knox	60	27	32	36	610	765				
Mid Cumberland	21	3	4	7	597	632				
Northeast	100	29	32	82	664	907				
Northwest	9	2	7	4	278	300				
Shelby	4		6	14	293	317				
Smoky Mountain	109	8	35	67	693	912				
South Central	5			12	560	577				
Southwest	1	1	6	4	192	204				
TN Valley	5		3	12	263	283				
Upper Cumberland	6	4	5	1	375	391				
Total	477	90	153	280	5312	6312				
	Percent									
Davidson	17%	1%	1%	8%	73%	100%				
East Tennessee	14%	2%	3%	2%	79%	100%				
Knox	8%	4%	4%	5%	80%	100%				
Mid Cumberland	3%	0%	1%	1%	94%	100%				
Northeast	11%	3%	4%	9%	73%	100%				
Northwest	3%	1%	2%	1%	93%	100%				
Shelby	1%	0%	2%	4%	92%	100%				
Smoky Mountain	12%	1%	4%	7%	76%	100%				
South Central	1%	0%	0%	2%	97%	100%				
Southwest	0%	0%	3%	2%	94%	100%				
TN Valley	2%	0%	1%	4%	93%	100%				
Upper Cumberland	2%	1%	1%	0%	96%	100%				
Total	8%	1%	2%	4%	84%	100%				

At the Time 2 investigation into the implementation of KEEP, Davidson and East TN were doing a better job than the remaining regions of getting newly admitted kids into KEEP trained homes. Southwest, South Central, and Shelby were having the hardest time getting kids into KEEP homes early.

Summary: KEEP Implementation

It has been said before, but typically bears repeating: at-scale implementation efforts are very, very difficult. Programs like KEEP may be particularly vulnerable, as they are generally voluntary programs, and time-intensive at that. To be sure, TNDCS took significant steps to mitigate the expected difficulty with implementation: providing child care for foster parents, flexible scheduling (evenings, weekends), and thoughtfully locating groups within communities to minimize travel time. Yet it is safe to say that overall, implementation lagged somewhat behind expectations – perhaps at Time 1, and certainly at Time 2.

When we first looked at the status of KEEP implementation (Time 1), just before the Interim Evaluation Report and when KEEP was still only active in the East Grand Region, about 30 percent of children and 20 percent of eligible foster parents had participated in KEEP, either by virtue of their placement in a home with KEEP-trained foster parents or their having begun KEEP training, respectively. Implementation levels have fallen sharply since then (Time 2): 8 percent of eligible foster homes and 16 percent of eligible children have participated in KEEP as of September 30, 2019. That said, foster parents who participated in KEEP are just about unanimous in their praise of the program. It was described as a highly supportive experience, filled with vitally important camaraderie and the teaching of practical parenting skills. While in some respects the real test is in the extent to which KEEP, as implemented, had its intended effect on permanency for children, any consideration of permanency findings must keep in mind the actual extent of implementation before any attributions are made.

Nurturing Parenting Program

The implementation approach to NPP evolved over time. Whereas the initial idea was to train FSS workers in the Shelby and Northwest regions to directly provide NPP to eligible parents, ultimately the Department decided to contract with outside providers to deliver NPP in all NPP participating regions: Shelby, Northwest, Northeast, East, Smoky Mountain and Knox.

Eligibility criteria

There are four main criteria that a parent must meet in order to be considered eligible for NPP.

- 1. First, parents must have at least one **open non-custodial case** (CPS-A/I, FSS and/or FCIP) and live in one of the NPP-implementing regions.
- 2. Second, at least one child in the family must be between the **ages of 0 to 12 years** of age.
- 3. Third, parents must have an actionable score on two or more of the following five items on the **FAST**: Supervision, Discipline, Knowledge of Child/Family Needs, Family Conflict, and Family Safety.⁹
- 4. The fourth criterion involves the use of the **Adult Adolescent Parenting Inventory** (**AAPI**). The AAPI is completed by the NPP provider in partnership with the primary caregiver. If there are two caregivers in the household, the family can move forward with the service if either of them have an eligible score. The AAPI has five constructs (A-D):
 - a. Construct A Expectations of Children
 - b. Construct B Parental Empathy towards Children's Needs
 - c. Construct C Use of Corporal Punishment

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⁹ There may be cases when a parent might meet the eligibility criteria for NPP but has extenuating or 'special circumstances' that preclude them from participation, such as when a family is struggling with housing instability. In these circumstances, the worker will need to obtain approval from their Team Coordinator to exempt the family from referral to NPP.

- d. Construct D Parent-Child Family Roles
- e. Construct E Children's Power and Independence

One caregiver has to score a 4 or below on construct B, C and D to be considered eligible for NPP.

All families within NPP-operating regions determined to be eligible for NPP because a primary caregiver met the criteria outlined above are included in the analysis.

Analysis of implementation

Linked Analytic File

To understand the extent to which NPP was implemented in line with the rules outlined above, Chapin Hall constructed an analytic file that linked the following separate data sources:

- 1. **Maltreatment data** (TFACTS): this was the source of information about children and families involved in either a CPS-I or CPS-A event.
- 2. Other non-custodial data (TFACTS): this was the source of information about children and families involved in either a FSS or FCIP event.
- 3. **FAST data** (TFACTS): this was the source of information about the extent to which families would be considered for referral to NPP.
- 4. **NPP referral data** (TNDCS-provided NPP referral database): this was the source of information about the extent to which Families were referred to an NPP agency.
- 5. **AAPI database** (administrative database): this was the source of information about which families were administered the AAPI and, of those, which families scored in the eligible range on the AAPI
- 6. **NPP program data** (Chapin Hall database): this was the source of information about which families actually participated in at least one session of NPP. This database was constructed by Chapin Hall, using program administration forms completed by the NPP providers and uploaded to a secure server by our partners at DCS.

Eligibility for and Participation in NPP

Table 15 displays the flow of children and families through the NPP eligibility and referral process.

Table 15. Eligibility for and participation in NPP

		Percent of previous row
	Number	count
Criteria 1. Child/event combinations occurred in NPP-implementing		
regions during the NPP period	59,687	100%
Criteria 1 & 2: Met Criteria 1 AND had FAST score that met NPP		
eligibility criteria	7,500	13%
Criteria 1, 2, & 3: Met Criteria 1 & 2 AND had at least one chld age		
12 or under in the family	6,613	88%
Referrals: Met Criteria 1, 2, & 3 AND was referred to NPP contract		
agency	877	13%
AAPI: Met Criteria 1, 2, & 3, referred to NPP contract agency, AND		
was administered the AAPI	778	89%
Criteria 1, 2, 3, & 4: Met Criteria 1, 2, & 3; referred for NPP;		
administered AAPI; AND, scored eligible for NPP services.	378	49%
Began NPP: Participated in at least ONE NPP session	125	33%

Of the nearly 60,000 child/event combinations (CPS-I, CPS-A, FSS, and FCIP) that occurred in the NPP-implementing regions during the NPP period, 13 percent of them resulted in a FAST score that left the family eligible to be considered for NPP. The vast majority of those (88 percent) were families that had at least one child age 12 years or younger. This is the first point at which the implementation process seems to break down. Only 13 percent of families that were deemed eligible for referral to an NPP agency (n=877) were actually referred. At this point, we do not know what accounts for this low rate of referral. While it may be that some of these families were actually deemed ineligible due to other extenuating circumstances, it is highly unlikely that this accounts for the majority of the gap between what happened (13 percent referred to an NPP agency) and what was intended to happen (close to 100 percent referred to an NPP agency).

Encouragingly, most of the families who are referred to an NPP agency go ahead and at least have an APPI administered (89 percent of those referred). This means the family gets referred and then shows up for at least one meeting. However, just under half of those families score eligible for NPP on the AAPI (49 percent).

The source of information Chapin Hall used to determine whether a family participated in at least one session of NPP comes from forms completed by NPP contract agency staff, sent over to TNDCS, and then uploaded to a secure server for Chapin Hall to download and enter into a separate database. Of the 378 families that met all NPP eligibility criteria (which we know is likely less than the true number, given how few families were referred to an NPP agency), Chapin Hall was only able to find a match for 33 percent of them in the database constructed from the provider-completed forms about program participation. Nearly a quarter of those 378 families were associated with family ID's that could not be identified in TFACTS, meaning Chapin Hall was unable to link the program participation form to any given family in the analytic file. That leaves about half of the referred families without program participation data. Some of this may be because some families, despite scoring eligible on the AAPI, decided not to continue with NPP services. Some of this may be because data entry by the contract providers fell short of expectations.

We would also acknowledge here that TNDCS keeps their own records regarding NPP participation, which show a much higher rate of participation than is displayed here. Again, we suspect that a big part of our issue in accurately reporting NPP participation has to do with a flawed data entry process within the group of NPP contract providers.

In Table 16 we provide the same information, but broken down by region.

Table 16. Eligibility for and participation in NPP, by Region

		East TN. Knox			Nort	Northeast Northwest			Shelby		Smoky Mt.		Total	
	Last	% prev.	Ki	% prev.		% prev.		% prev.	% prev.			% prev.	10	% prev.
	Number	row	Number	row	Number	row	Number	row	Number	row	Number	row	Number	row
Criteria 1. Child/event combinations occurred in NPP- implementing regions during the NPP period	9,704	100%	9,786	100%	16,176	100%	4,954	100%	8,410	100%	10,657	100%	59,867	100%
Criteria 1 & 2: Met Criteria 1 AND had FAST score that met NPP eligibility criteria	1,199	12%	992	10%	1,870	12%	1,157	23%	303	4%	1,979	19%	7,500	13%
Criteria 1, 2, & 3: Met Criteria 1 & 2 AND had at least one chld age 12 or under in the family	1,075	90%	881	89%	1,572	84%	1,070	92%	292	96%	1,723	87%	6,613	88%
Referrals: Met Criteria 1, 2, & 3 AND was referred to NPP contract agency	178	17%	56	6%	406	26%	120	11%	13	4%	104	6%	877	13%
AAPI: Met Criteria 1, 2, & 3, referred to NPP contract agency, AND was administered the AAPI	159	89%	55	98%	384	95%	84	70%	10	77%	86	83%	778	89%
Criteria 1, 2, 3, & 4: Met Criteria 1, 2, & 3; referred for NPP; administered AAPI; AND, scored eligible for NPP														
services.	73	46%	34	62%	182	47%	43	51%	7	70%	39	45%	378	49%
Began NPP: Participated in at least ONE NPP session	21	29%	8	24%	59	32%	16	37%	3	43%	18	46%	125	33%

There is some important variability to point out here. First, the extent to which families scored in the eligible range on the FAST varied quite a bit, with only 4 percent of families in Shelby to 23 percent of families in Northwest. There is also quite a bit of variability in the extent to which eligible families were referred to an NPP agency, ranging from 4 percent in Shelby and 5 percent in Knox to 26 percent in Northeast.

There was regional variation in the extent to which families who were referred to an NPP agency went in to have the AAPI administered, from 70 percent in Northwest to 95 percent and 98 percent in Northeast and Knox, respectively. Similarly, we see regional variability in the extent to which families score in the eligible range on the AAPI, from 45 percent, 46 percent, and 47 percent in Smoky Mt., East TN, and Northeast (respectively) to 70 percent in Shelby, although it must be noted that in Shelby, the AAPI was only administered to 10 families, of which seven scored in the eligible range. Lastly, we see variation in the degree to which families participated in at least one NPP session, at least based on the data available to Chapin Hall for this evaluation. In Smoky Mt., 46 percent of eligible families participated in at least one NPP session; in Knox, just 24 percent of eligible families participated in at least one NPP session.

NPP: Summary Thoughts

The previous discussion about the implementation of NPP is disappointing on two fronts. First, it would appear that implementation has fallen short of expectations. From these data it does not appear that as many families are being referred to NPP as could be. Overall, just 13 percent of eligible families are being referred to an NPP contract agency. If the Department chooses to continue with NPP following the Waiver, attention should be given to this part of the process of care. Second, it is disappointing in that we have reason to believe the implementation story we are presenting here is different than the implementation story that exists elsewhere, given other sources of information about NPP activity. This underscores again the critical important of tightening up the process of care – including data entry requirements and processes – so that going forward, the Department can get an accurate read on what is actually happening with this program, which represents a significant investment.

NPP participation aside, it is also worth noting that proportionally, few children and families clear the first eligibility hurdle: having an eligible score on the FAST. On average, just 13 percent of child/events result in an NPP-eligible FAST score. That means that the vast majority of children and families having non-custodial experiences do not meet the criteria for participation in NPP. If NPP is designed to prevent the recurrence of maltreatment and, potentially, future placements into out\-of-home care, it would seem in the Department's interest to have this intervention available to a larger swath of children and families, so that more people can derive the protective benefits of the program.

The General Staff Survey

The purpose of the GSS is to use field-tested scales to identify community-, staff-, work unit-, and agency-level factors that may affect implementation of Waiver interventions. Research suggests that the topics covered via the GSS may be important considerations with respect to the interventions' implementation context (Baumann, Kern & Fluke, 2011). Whether interventions succeed or fall short of expectations, understanding the context for these outcomes is important. By implementing the survey near the beginning of the Waiver and repeating it over the course of the Waiver, we identified the baseline for these scales and gained insight into any changes over time. We were also able to capture the perspectives of newer staff who joined the agency since the earlier rounds of the survey and expand use of the survey statewide for the final iteration.

In all, three rounds of a General Staff Survey (GSS) have been implemented in the four East Grand Waiver regions; the first (GSS1) occurred in June, 2015, and the second (GSS2) in January, 2017, and the final (GSS3) round was implemented in February, 2019. Briefly, the scales used in the survey cover such topics as:

- 1. Role type
- 2. Program area (in-home services, foster care, investigations, assessments)
- 3. Years working in child welfare or in current position
- 4. Perceptions of workload and job satisfaction
- 5. Perceptions of supervision

- 6. Confidence in local service availability and quality
- 7. Proclivity towards family preservation or child safety
- 8. Attitudes regarding placement, reunification, and case closure
- 9. Demographic characteristics (age, education, race/ethnicity)
- 10. Attitudes about the Waiver interventions

Results from the first and second GSS were used to make alterations and additions to the survey prior to the implementation of the subsequent wave(s) of the GSS. For example, factor analyses and reliability analyses indicated some scale items could be dropped, so for the sake of parsimony, they were eliminated. For the GSS2, additional questions about job satisfaction were added (to make the measure more robust) and scales concerning caseworkers' perceptions of support or liability should something egregious happen on one of their cases were also added. Finally, for the GSS3, some scales were dropped (see Appendix A) and the survey was expanded to examine staff perspectives on supervision in substantially more depth. We also added questions about FAST and NPP of pertinent staff and expanded our geographic scope of data collection by implementing it statewide.

Response Rates

Table 10 presents the GSS1, GSS2, and GSS3 response rates overall, and by region. The overall response rate across the four regions was 65 percent on the GSS1 (n = 217), 79 percent on GSS2 (n = 291), and 70 percent (n = 443) in the GSS3.¹⁰ While expansion of the GSS statewide was associated with a drop in the percentage of participants who responded in the GSS3 (57%), the targeting of a wider circle of staff yielded higher participation numbers overall (n = 1916), thus permitting more robust exploration of concepts of interest.

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¹⁰ This response rate is for the four participating regions only. Denominators shifted between the three waves as more staff were targeted for inclusion at each round of the GSS.

Table 17. Response to General Staff Survey, by Region

		GSS1 Total			GSS2 Total		GSS3 Total			
Region	Invited* Participated		Response	Invited*	Participated	Response	Invited*	Participated	Response	
Total	335	217	65%	370	291	79%	1916	1090	57%	
East	58	36	62%	59	51	81%	121	76	63%	
Knox	95	51	54%	120	91	76%	141	107	76%	
Northeast	107	95	89%	119	94	79%	181	119	66%	
Smoky Mt.	75	35	47%	73	55	75%	203	141	70%	
Davidson	*	*	*	*	*	*	146	53	36%	
Mid- Cumberland	*	*	*	*	*	*	236	109	46%	
Northwest	*	*	*	*	*	*	117	69	59%	
Shelby	*	*	*	*	*	*	216	86	40%	
South Central	*	*	*	*	*	*	151	93	62%	
Southwest	*	*	*	*	*	*	109	63	58%	
Spec. Investigations	*	*	*	*	*	*	52	25	48%	
TN Valley	*	*	*	*	*	*	109	51	47%	
Upper Cumberland	*	*	*	*	*	*	134	98	73%	

^{*} Did not participate in GSS1 or GSS2

Participation

Table 11 presents the profile of respondents by region and role for each wave of the survey. As expected, given structure and staffing patterns, caseworkers and CM3s represented the vast majority of participants in all rounds of the survey.

Table 18. Region and Role of GSS Participants, by Wave¹¹

	Caseworke	rs & CM3s	Team I	Leaders	Team Coordinators		
	Participated	% of Row Total	Participated	% of Row Total	Participated	% of Row Total	
GSS1 Total	166	80%	26	13%	15	7%	
East	24	71%	6	17%	4	12%	
Knox	41	85%	5	10%	2	4%	
Northeast	77	82%	13	14%	4	4%	
Smoky Mt.	24	77%	2	7%	5	16%	
GSS2 Total	202	69%	62	21%	16	5%	
East	36	74%	10	20%	3	6%	
Knox	63	74%	18	21%	4	5%	
Northeast	66	73%	18	20%	6	7%	
Smoky Mt.	34	65%	16	31%	2	4%	
GSS3 Total	872	75%	209	18%	46	4%	
East	59	74%	17	21%	3	4%	
Knox	87	79%	15	14%	4	4%	
Northeast	94	75%	23	18%	4	3%	
Smoky Mt.	105	72%	26	18%	6	4%	
Davidson	52	85%	4	7%	3	5%	
Mid-Cumberland	86	72%	23	19%	6	5%	
Northwest	52	69%	16	21%	4	5%	
Shelby	69	71%	21	22%	4	4%	
South Central	72	74%	19	20%	4	4%	
Southwest	48	74%	13	20%	3	5%	
TN Valley	46	78%	8	14%	1	2%	
Upper Cumberland	80	78%	18	18%	2	2%	
Special Investigations	22	71%	6	19%	2	7%	

Table 12 presents the distribution of surveys from staff by wave, region, and program area. As some staff, such as Team Coordinators, CQI, or training staff may not have a single program area affiliation, they are excluded from the frequencies below and any program area analyses. FSW staff comprised the largest group of respondents, followed by CPS-A, CPS-I, and FSS & FCIP respectively.

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¹¹ Excludes surveys from staff not affiliated with these roles (e.g., CQI, training, etc.) and includes the centrally-managed CPS-I staff the Team Leaders overseeing investigators who are assigned to cases in the region.

Table 19. Region and Program Area of GSS Participants, by Wave

	CP	PS-A	CI	PS-I	FSS &	& FCIP	FS	SW	Overall
Region	Number	% of Row Total	Total Number						
GSS1 Total	55	28%	30	16%	18	9%	91	47%	194
East	8	26%	7	23%	4	13%	12	39%	31
Knox	13	28%	2	4%	2	4%	30	64%	47
Northeast	28	31%	16	18%	9	10%	37	41%	90
Smoky Mt.	6	24%	5	20%	3	12%	12	46%	26
GSS2 Total	63	23%	53	20%	27	10%	127	47%	270
East	11	23%	8	17%	5	11%	23	49%	47
Knox	18	21%	17	20%	3	4%	47	55%	85
Northeast	24	28%	15	17%	15	17%	32	37%	86
Smoky Mt.	10	19%	13	25%	4	8%	25	48%	52
GSS3 Total	324	26%	241	20%	125	10%	608	45%	1298
East	23	28%	21	26%	6	7%	32	39%	82
Knox	31	28%	18	16%	7	6%	55	50%	111
Northeast	28	22%	33	26%	17	13%	48	38%	126
Smoky	16	11%	16	11%	12	8%	99	69%	143
Davidson	23	37%	13	32%	9	14%	18	29%	63
Mid-Cumberland	48	38%	25	20%	12	10%	40	32%	125
Northwest	27	35%	17	22%	10	13%	24	31%	78
Shelby	37	36%	23	22%	1	1%	42	41%	103
Smoky	16	11%	16	11%	12	8%	99	69%	143
South Central	27	28%	22	23%	12	13%	35	36%	96
Southwest	15	24%	14	23%	10	16%	23	37%	62
TN Valley	13	21%	1	2%	3	5%	44	72%	61
Upper Cumberland	20	19%	22	21%	14	13%	49	47%	105

Scale Results

Over the course of the project, an array of scales exploring attitudes, experiences and perspectives were asked of staff in participating regions. Details on the descriptive data, the bivariate analyses for each of the waves, and the overall cross-wave scores are available in Appendix A. Most scales used a 5- or 7-point system where low numbers reflect disagreement and high numbers reflect agreement.

Repeated measures analyses were conducted to examine changes over time and differences between the four East Grand regions. Further, using the data just from the GSS3, ANOVAs, chi-square analyses, and t-tests were run to test for significant differences in scores by program area or staff role. Unless otherwise specified, all results presented were statistically significant. Finally, a multilevel modeling analysis was conducted to examine associations between worker characteristics and their placement decisions.

Repeated Measures Analysis

This section presents the results of the repeated measures analysis, an analytic approach that enables robust analyses identifying trends over time and differences between regions. To account for correlation between responses from the same people, and correlation between responses from people in the same region, and to handle the fact that not all staff participated in all three rounds 55

of the GSS, linear mixed models with fixed effects for GSS round and region affiliation using an unstructured covariance were employed.

Due to missing data, surveys were linked across the three GSS rounds through a variety of means, including employee ids, email addresses, and first and last names. In all, data associated with 689 unique staff who participated in one or more rounds of the GSS were available to analyze. Northeast staff composed the largest group (n = 208, 30%), followed by Smoky (n = 185, 27%), Knox (n = 173, 25%), and East (n = 123, 18%).

Eight scales or questions measuring staff perspectives were administered across all three waves of the General Staff Survey in the four East Grand regions. Table 20 presents overarching results and Appendix A shares graphs and the statistical details of these analyses.

Most scales were associated with changes over time. As Table 20 indicates, with the exception of staff proclivity to reunify children with their families, and use of external or internal cues for case closure, statistically significant changes in average responses occurred over time. Some scales, such as general and specific confidence in services, and staff orientation towards family preservation or child safety showed fluctuating patterns, while others, such as concerns about workload, and job satisfaction showed increases over time. Staff proclivity to reunify children decreased between the first and second round of the GSS (which took place in 2015 and 2017 respectively), and remained diminished at the time of the GSS3 (administered in 2019).

Differences between regions were detected in some, but not all measures. No differences between regions were observed with respect to job satisfaction, proclivity to reunify, and use of internal (personal) cues as references in case closure decisions. However, compared to Knox, the East, Northeast, and Smoky staff reported lower confidence in services generally and specifically. East staff reported a lower proclivity to prevent removal than Knox staff, while Northeast staff were less likely than Knox staff to prioritize use of external cues (e.g., considering the family's culture, perspectives, etc.) when deciding to close a case. Smoky staff indicated higher concerns about workload compared to Knox staff.

Table 20. Changes in Scale Scores and Differences between Regions

	Changes over	Differences	East	Northeast	Smoky	
	Time	Btw. Regions	vs. Knox	vs. Knox	vs. Knox	
General Confidence in Services	Yes, Fluctuating	Yes	Yes, Lower	Yes, Lower	Yes, Lower	
Confidence in Specific Services	Yes, Fluctuating	Yes	Yes, Lower	Yes, Lower	Yes, Lower	
Workload Concerns	Yes, Increased	Yes	No	No	Yes, Higher	
Job Satisfaction	Yes, Increased	No	No	No	No	
Family Preservation vs. Child Safety	Yes, Fluctuating	No	No	No	No	
Proclivity to Prevent Removal	No	Yes	Yes, Lower	No	No	
Proclivity to Reunify	Yes, Decreased	No	No	No	No	
Use of External Cues in Case Closure Decisions	No	Yes	No	Yes, Less Likely	No	
Use of Internal References in Case Closure Decisions	No	No	No	No	No	

Results from the GSS3

Results of analyses conducted using the information collected in the statewide implementation of the GSS3 offer additional insights into factors that may affect Waiver implementation. Utilizing the cross-sectional data gathered from a larger sample of staff enabled a deeper examination of associations between the type of work child welfare staff do (i.e., program areas) and role (Caseworker, Team Leader, etc.) with attitudes and perspectives about supervision, resources, and priorities in their work.

Staff Perspectives on Supervision. The final round of the GSS explored a much wider variety of supervisory topics compared to the prior iterations of the survey. These included the frequency and content of the supervision, as well as an expansive set of questions regarding the dynamics of the supervision staff received.

When asked about the frequency of supervision, junior staff reported more frequent supervision than more senior staff. Fifty-four percent of caseworkers, 46 percent of supervising CM3s, and a quarter of team leaders reported meeting with their supervisors at least weekly.

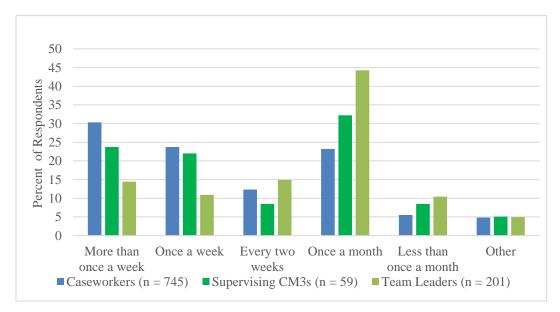


Figure 7. Frequency of Supervision

CPS-I staff reported a lower frequency of supervision meetings with their supervisors compared to CPS-A, FSW, and FSS/FCIP staff. While CPS-I staff indicted on average that it was more than two weeks between meetings with their supervisors, other program staff reported a frequency of supervision meetings of closer to once a week.

Overall, topics discussed in supervision were most likely to focus on cases and least likely to focus on the caseworker's skills or emotional state. Items in Figure 8 are presented in order of greatest to least agreement, where agreement is defined as the overall percentage of staff who indicated the topics were addressed "Always" or "Most of the Time." As the figure indicates, over 70 percent of caseworkers indicated that they discuss cases during supervision most of the time or always. Approximately 30 percent of caseworkers reported they never or rarely discuss

their emotional reaction to cases or practice/clinical skills during supervision. Average scores for these items can be found in Appendix A.

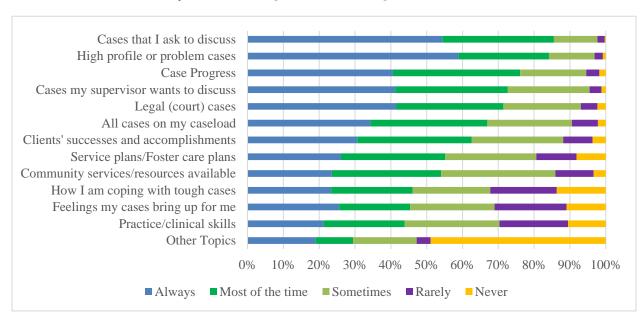


Figure 8. Topics Discussed in Supervision

To explore dynamics of supervision in more depth, caseworkers were asked dozens of questions about their experience with their current supervisor. A factor analysis uncovered four distinct domains having to do with different types of supervisory support. These included: 1) Instrumental Support, 2) Affective Support; 3) Educational Support; and 4) Equity Support. Details about the items composing these domains can be found in Appendix A, but general descriptions of the domains are provided here for immediate reference.

Instrumental Support has to do with job know-how. Supervisors who provide a high level of instrumental support communicate policies and procedures clearly. They are seen as experts in the work and consistently model best practices in casework. They help their supervisees get better at their jobs.

Affective Support has to do with the provision of emotional support. Supervisors who provide a high level of affective support create an environment in which staff can talk about their emotional reactions to the work. Moreover, supervisors who excel at providing affective support will know how to identify and support staff who are experiencing secondary trauma.

Educational Support has to do with promoting skill-building amongst workers. Supervisors who provide a high level of educational support will actively encourage their staff to attend trainings and will help staff apply new skills in practice.

Equity Support generally has to do with fairness in supervision and in the oversight of the work. Supervisors who would score high in this domain distribute cases fairly and apply rules and policies consistently. They support workers in establishing "work/life balance" and are helpful when work demands become noticeably high.

As Figure 9 suggests, average scores across the four supervisory domains did not differ significantly. Caseworkers scored supervisors highest in the domain of Instrumental Support. Consistent with the findings about the infrequency of discussion about caseworkers' coping and emotional states, above, the Affective Support domain received the lowest average score.

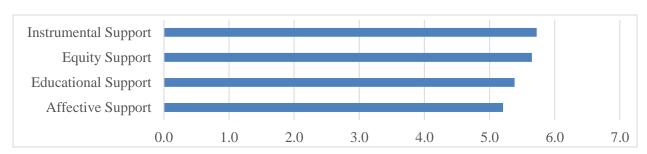


Figure 9. Average Ratings on Supervisory Domains

However, caseworkers' perspectives of supervisory educational, equity, and instrumental support varied by program area. Specifically, CPS-I staff reported statistically significant, lower levels of educational, equity, and instrumental support from their supervisors compared to FSS & FCIP workers. No other differences in supervisory domain scores by role were statistically significant.

Caseworkers anticipating higher levels of support from their supervisor and administrative leadership in a circumstance where a child on their caseload experienced harm also reflected more positively on a number of measures. Staff who indicated they felt higher levels of support were strongly associated with: 1) more job satisfaction; 2) fewer concerns about workload; 3) more positive reflections on the presence of Affective, Equity, Educational, and Instrumental Supervision; and 4) having fewer years of experience with child welfare work.

Staff Perspectives on Resources. Caseworkers' confidence in services varied by program area and role. When asked about the availability of services in the community to meet clients' needs, staff affiliated with the FSS & FCIP programs expressed less confidence than staff associated with CPS-I, CPS-A or FSW programs. Staff were also asked to indicate their confidence in an array of individual services, including mental health, substance abuse, domestic violence, housing assistance, parenting, household management, food services, and utilities. Here, the only statistically significant difference detected was that, compared to FSW staff, CPS-I staff expressed lower confidence in services targeted at helping parents manage the day-to-day routines of family members.

No differences by role were detected with respect to staff's overall confidence in services, but differences emerged with respect to individual services. Team Leaders were less confident overall in mental health and substance abuse compared to caseworkers and Supervising CM3s were less confident than caseworkers regarding housing assistance services. Staff felt comparable levels of confidence with respect to food/pantry services and those related to household management supports.

Staff Perspectives on Child Welfare Priorities. Perspectives about family preservation vs child safety, preventing removal, reunification also varied by program area. Staff were asked a series of questions that identify where one falls on a continuum of beliefs spanning from family preservation to child safety. Here, CPS-I reported higher scores on child safety orientation compared to their CPS-A colleagues. Similarly, CPS-A staff were associated with a higher

proclivity to prevent removals compared to FSW workers, and FSW staff were associated with a higher proclivity to reunify compared to staff affiliated with CPS-A and CPS-I program areas.

Perspectives about family preservation and child safety, proclivity towards preventing removal, and proclivity towards reunification efforts also differed according to one's role. Staff ranging from caseworkers to RAs were surveyed on their perspectives on these priorities. On a scale assessing the degree to which one's beliefs favor family preservation versus child safety (Dalgleish, 2010), as staff seniority rose, perspectives shifted; caseworkers tended to favor child safety most strongly while leadership tended to favor family preservation with increasing conviction as they progressed through the ranks. Similarly, as seniority increased, average scores reflecting one's strength of commitment to efforts preventing removal or fostering reunification also increased.

No differences between staff from different program areas or in different roles were detected for some measures. Staff from the different program areas generated similar average scores on job satisfaction, or the extent to which they consider their own personal experiences or family culture and the perspectives of family members prior to closing a case. Staff across the program areas also did not differ on the extent to which they were concerned about lack of supervisory or administrative support (i.e., liability) should something on their case go awry. While statistical tests indicated that perceptions of workload differed by program area, post hoc analyses did not identify any significant contrasts that were driving this finding. When staff in different roles were compared, seniority, or lack thereof had no association with general confidence in services, or confidence in food or household management support services.

Staff Perspectives on Waiver Interventions: FAST and NPP. CPS-I, CPS-A, FCIP and FSS staff across the state were asked about their use and perspectives of FAST and 395 staff responded to the questions. Seventy-two percent of CPS-I, CPS-A, FCIP, and FSS statewide indicated they use the FAST to identify services that families need either, "Most of the time" or "Always," while 19 percent of these same staff types indicated "Never" or "Sometimes" using the FAST for this purpose. Sixty-five percent of CPS-I, CPS-A, FCIP, and FSS staff statewide indicated they use the FAST to make important decisions about cases "Most of the time" or "Always," but close to a quarter (22%) said they "Never" or only "Sometimes" use FAST in this manner. Seventy-two percent of CPS-I, CPS-A, FCIP, and FSS staff statewide indicated that they revisit the FAST if case circumstances change "Most of the time" or "Always," but 16 percent said they "Never" or only "Sometimes" revisit the FAST. Forty-one percent of CPS-I, CPS-A, FCIP, and FSS staff statewide agreed with the statement that they find the FAST to be useful in their work with families; 30 percent of staff disagreed with the statement. Lastly, 38 percent of CPS-I, CPS-A, FCIP, and FSS staff statewide agreed or strongly agreed that FAST information helps them to achieve better outcomes for the families they work with; 30 percent of staff disagreed.

When staff in NPP-participating regions were asked about their practices and perspectives about NPP, 45 percent of CPS-I, CPS-A, FCIP, and FSS staff in participating regions (n=201) indicated that, at least sometimes, they had referred eligible cases to NPP that they felt were not truly appropriate for NPP. Fifty-five percent indicated this was never the case. Half of CPS-I, CPS-A, FCIP, and FSS staff in participating regions (n=196) indicated they "Never" or only "Sometimes" receive regular updates from NPP providers; 45% of staff indicated they receive updates "Always" or "Most of the time." Twenty percent of CPS-I, CPS-A, FCIP, and FSS staff in participating regions (n=196) indicated some degree of dissatisfaction with the quality of the NPP services their cases receive, while 30 percent agreed or strongly agreed that NPP services were

satisfactory. Almost half (45%) of CPS-I, CPS-A, FCIP, and FSS staff from participating regions (n=197) at least "Somewhat agreed" that NPP helps them to achieve better outcomes for the families they work with, while 18 percent at least "Somewhat disagreed" with that notion.

Implications of the GSS Findings

The lack of variability or differences between regions on the scales reflecting perspectives on family preservation versus child safety, or reunifying children to their families suggest that while there may be individual staff who think differently, on average, staff across the regions hold fairly similar perspectives on these topics. That said, there is some indication that regional variations exist with respect to perspectives about the degree of effort one should make to prevent removals. Thus, it may be worthwhile to further explore whether these attitudes are associated with trends or patterns in removal outcomes at the case, and even the regional level. Moreover, on average, staff from each of the regions indicated similar levels of satisfaction with their jobs. Staff in the Smoky region indicated slightly higher concerns about workload; however, while statistically significant, the magnitude of the difference was not large.

Still, for the four East Grand regions, changes over time are apparent across five of the eight scales examined, and many of the changes do not appear uni-directional, or linear. Based on our information, it is hard to know the extent to which such fluctuations reflects changes in conditions (e.g., a service provider going out of business, thus confidence drops), real changes in the attitudes of participants, or simply that as our samples increased, the broader group of participants encompassed a wider variety of perspectives and thus yielded different results. While pairing responses from the same staff over time is ideal, the sample would have been limited to a very small portion of responses from people and to only those who have been at the agency for the past four years. In and of itself, this would have produced biased results not reflective of newer staff, or those who elected to participate in some but not all rounds of the GSS.

Still in the findings presented from the statewide sample, above, it is also important to note that attitudinal differences between staff according to the role they have in the agency (Caseworker, Team Leader, Team Coordinator) or program area in which they work (investigations, assessments, custodial, etc.) may reflect both the reality of their day-to-day concerns and, perhaps, that with tenure and experience, perspectives can change. For example, as CPS-I staff are charged with investigating reports alleging higher levels of risk, it might be expected that they rank higher on child safety compared to their CPS-A colleagues. Similarly, should all staff in all roles receive the same frequency of supervision? Which staff need more of certain types of supervision? The lessons from these findings are in part based on whether they reflect what is expected of staff in these roles, or, on the other hand, indicate areas an agency can address to support staff growth in a way that may "move the needle" and yield better outcomes for children and families. Overall, differences between staff (whether at the region, role, or program area level) may or may not be problematic depending on the topic and its alignment with system or regional goals. Still, individual level differences reflecting extreme scores on single or multiple scales may be of concern, particularly if they percolate up to bias decision making, as was found in the analysis of placements. Again, what to make of the findings may depend on the question in focus.

Outcomes Study

At the heart of the outcomes study are six research questions:

Key Questions

- 1. What is the impact of the Waiver demonstration project on the rate of **maltreatment recurrence** (a substantiated investigation within 12 months of a previous substantiated investigation), as well as re-report?
- 2. What is the impact of the Waiver demonstration project on the rate of **admission to foster care** for children who are the subject of a maltreatment report?
- 3. What is the impact of the Waiver project on the likelihood that children will experience a **permanent exit** within set periods of time?
- 4. What is the impact of TNDCS' IV-E Waiver demonstration project on the likelihood that children in out-of-home care will experience a **movement** from one foster home to another?
- 5. What is the impact of TNDCS' Waiver project on the likelihood that children will experience **reentry** following a permanent exit from care?
- 6. What is the impact of TNDCS' IV-E Waiver demonstration project on the number of care days used, on average, both for children who enter placement after the implementation of the project as well as children in-care at the time TNDCS rolled out its IV-E Waiver demonstration project?

Sample

The TNDCS Waiver demonstration project targets all children between the ages of 0 and 18 who receive non-custodial services (investigations, assessments, family support services, family crisis intervention services) and children between the ages of 0 and 21 who are placed in DCS-licensed family foster homes. The sample includes both children in care at the start of the demonstration (the legacy caseload) and all admissions involving children entering family foster care. The demonstration project officially began on October 1, 2014. We use the experiences of children who belong to the 2010 through 2013 entry cohorts as a comparison group.

TFACTS was the primary source of data to help determine whether children would be included in the demonstration (treatment) or comparison group. Table 14 enumerates the breakdown of the admissions sample (demonstration and comparison) across regions.

Table 21. Admissions to Foster Care, by Region and Fiscal Year

	All Entries								
Region	FY14	FY15	FY16	FY17	FY18	FY19			
Total	6,363	6,144	6,491	6,703	7,182	6,945			
Davidson	475	429	459	511	520	493			
East Tennessee	484	450	489	353	555	536			
Knox	508	508	464	621	597	538			
Mid Cumberland	741	749	787	897	812	819			
Northeast	587	520	506	671	608	528			
Northwest	359	354	397	319	387	492			
Shelby	670	643	754	705	783	850			
Smoky Mountain	559	573	615	570	650	587			
South Central	354	416	541	567	695	618			
Southwest	355	302	261	339	341	298			
Tennessee Valley	611	567	579	590	583	566			
Upper Cumberland	660	633	639	560	651	620			

In terms of raw totals, it appears that the total number of children coming into care has, over time, generally trended upward. The number of children admitted to care increased in FY15, FY16, FY17, and FY18, with a modest decrease in FY19.

In Table 20 we look at children in the legacy or "in-care" groups – both the demonstration group (the 2014 in-care group) and the comparison group (in-care groups 2009-2013).

Table 22. Children in care on October 1 of the year, by Region

Region	IC2009	IC2010	IC2011	IC2012	IC2013	IC2014
Davidson	453	387	396	398	460	426
East Tennessee	493	425	534	498	492	408
Knox	498	506	574	676	630	656
Mid Cumberland	794	691	726	825	825	758
Northeast	515	516	640	706	756	721
Northwest	201	232	260	305	350	384
Shelby	935	807	1,008	1,036	979	807
Smoky Mountain	594	674	790	754	782	730
South Central	490	524	521	450	491	412
Southwest	294	295	304	298	367	336
TN Valley	636	687	710	681	720	680
U. Cumberland	437	465	605	703	742	758
Grand Total	6,340	6,209	7,068	7,330	7,594	7,076

In contrast to what we see in terms of admissions to care, the number of children in care on October 1 of the year has generally gone up since 2009, although we do see the trend line dip down for the 2014 in care group.

Generally speaking, the make-up of children in the demonstration-period admissions groups is similar to that of the comparison group (entry cohorts FY12 through 2014; see Figure 12).

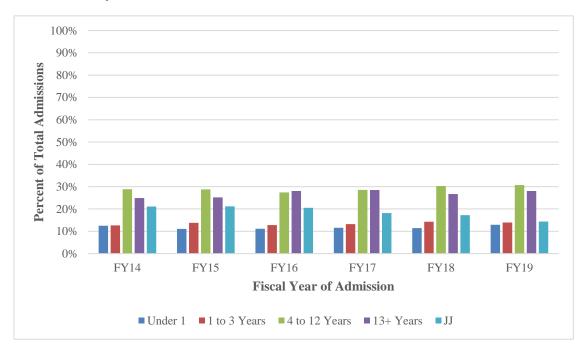


Figure 10. Age of children admitted to care, by fiscal year of admission

Overall, children coming into care are more likely to be 4 years old and older. Babies make up the smallest proportion of entrants, year to year.

As for the children in the in-care groups, we see very stable breakdowns by age over the five years represented below, in Figure 13.

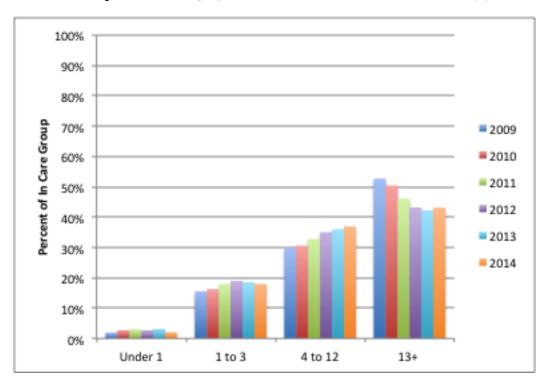


Figure 11. Age of children in care on in-care date (October 1), by year

The 2014 in care group has a greater proportion of 4 to 12 year-olds than years past. The proportion of children that are on the younger side (three years old and younger) has remained fairly stable. Although there are slightly more teens in the 2014 in care group than the 2013 in care group, the proportion of each in care group that is teens has generally gone down over time.

Data Sources

The primary source of data for the outcomes study is TFACTS, which includes information related to children's maltreatment history (maltreatment reports, investigations, assessments), other non-custodial services (Family Support Services, Family Crisis Intervention Program), and placements in out-of-home care. Tables from TFACTS were used to identify the group of children that would be included in the sample: (1) children age 0 to 21 who were placed in DCS-custody on or after October 1, 2014 as well as children in care ON January 1, 2014 and (2) children who are the subject of a non-custodial event on or after October 1, 2014.

Data analysis

The basic monitoring of core performance outcomes vis-à-vis the Waiver focuses on the following:

Re-reports and Recurrence

The Department is looking to NPP to address issues of re-reporting and recurrence, where recurrence is defined as a subsequent substantiated maltreatment investigation within 12 months of the preceding substantiated maltreatment investigation.

Admissions

We use the placement rate to consider changes in admissions to care. The placement rate is calculated by determining the number of children placed into out of home care per 1,000 children in the population. The placement rate is stratified by fiscal year of admission, by region, and by children's age at entry.

Placement stability

The method we use to measure placement stability is the cumulative probability, here in accumulating 30-day intervals. The cumulative probability answers the question, what is the probability that a child will experience *an initial* placement move in the first 30 days of their foster care spell, the first 60 days of their spell, the first 90 days of their spell, and so on. We focus on the first-ever placement change because the best way to prevent children from serial moves during their foster care spell is to avoid the first-ever move. Understanding when the probability of that first-ever move is highest gives leadership information on which they can act to try and get ahead of those experiences, and avoid them altogether. Data on the cumulative probability of an initial placement change is organized around children's age at the time their spell began.

Note the data presented here is on a subset of the full sample: children experiencing their firstever placement in out of home care.

Permanency

Quartile duration is a measure of permanency that describes the number of days it takes 25, 50, and 75 percent of an entry cohort to leave care. The 50 percent quartile duration is referred to as the median. We use median duration as the first measure of permanency.

The cumulative probability of a permanent exit is the second measure used to understand changes in exits to permanency for children admitted to care. Probabilities are considered in six-month intervals. The cumulative probability is organized around the age of children in the sample at the time their child spell began. For permanent exits we are including reunification, adoption, and discharges to relatives.

For the in-care group, we use the residual duration as a measure of permanency. The residual duration tells you how long, in days, it takes 50 or 75 percent of a group of children to leave foster care. We organize these data according to the length of time members of the various incare groups (2010 through 2013 for the comparison; 2014 for the IHT group) had been in care as of July 1 of the given in-care year: zero to six months; six to 12 months, 12 to 18 months, 18 to 24 months, and 24+ months.

Reentry

To measure reentry, we use the conditional probability of reentry, organized in six-month intervals and presented by exit year and age at exit. The question we are answering is, what is the probability that a child will reenter care in the first six months after their exit from care? For children who have not yet reentered after six months, what is the probability they will reenter in the next six-month interval (and so on)? Using small intervals of time makes it easier for agencies to consider what might be driving the reentries, when they do occur.

To assemble the reentry-specific analytic file we focus on children who exit from foster care; that is, we use exit cohorts rather than entry cohorts. As noted above, we re-categorized the age variable as well, so that here we are focusing on the child's age at the time of their discharge from care rather than their age at the time of their entry into care.

Care day count

At the heart of the Waiver demonstration model is the goal of reducing the number of foster care days systems use, which is, of course, simply the aggregate form of reducing the number of foster care days individual children are using. We provide counts of care days for the FY2015, FY2016, FY2017, and FY2018 entry cohorts, as well as the 2014 in-care group. For each group we also include a historical comparison of care day usage.

Conceptually, what we do with each entry cohort and for the single in-care cohort is identify the group of children who entered care in the relevant time period (within each fiscal year for the entry cohorts, and in-care on July 1 of the year for the in-care groups) and who were eligible for Waiver demonstration interventions, and then watch them flow out of care over the course of the Waiver period (until September 30, 2019). Each performance year starts with a group of children. For the entry cohorts, the first performance year starts with all of the eligible children admitted to care during that fiscal year. For each subsequent performance year, the performance year starts with all of the children (of those admitted in the first performance year) still in care at the beginning of the next performance year. A similar approach holds for the in-care group. The first performance year starts with all of the children in eligible placements/agencies on July 1 of the given year. Each subsequent performance year starts with the children still in care (of those who started out in the first performance year) at the beginning of the next performance year.

For the in-care group we structure the strata (sub-categories) a little differently. Typically, the strata are focused on the age of the child at the time they entered placement. We use this organizational frame for the in care group (as we do for the entry cohorts) but with an additional strata that tells us how long children between the ages of 4 to 12 (a specific target of the IHT demonstration) had been in care as of July 1 of the given year: 4 to 12 year olds who had been in care for less than two years as of July 1 of their in-care year and those who had been in care for more than two years as of July 1 of their in-care year. We do this out of recognition that longer-stayers tend to have a different set of trajectories than children who have not yet accumulated as much time in care.

Results

First, we will provide general performance trends over time, with a focus on the outcomes of particular interest to TNDCS, given the goals of the demonstration. Next, we provide intervention-specific impacts; namely, for the FAST (admissions to care), KEEP (placement stability and permanency), and NPP (recurrence and admission to care).

As described above, the core outcomes of central concern under the demonstration project include admission to foster care, placement stability, permanency, reentry, and care day utilization. We take each one in turn in the sections that follow.

Maltreatment Recurrence

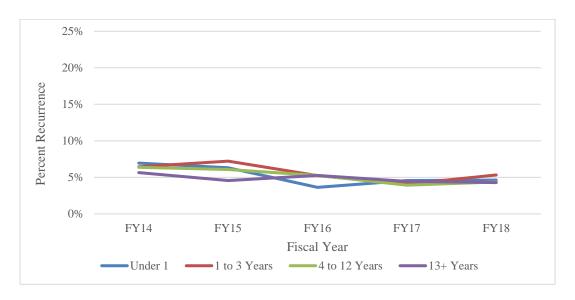
The tables and figures below provide information on the extent to which children who are the subject of a substantiated investigation have another maltreatment experience (again the subject of substantiated investigation) within 12 months of the initial event. Table 20 provides the regional view over the last several fiscal years.

Table 23. Recurrence of Maltreatment, by Region and Fiscal Year

Region	FY14	FY15	FY16	FY17	FY18	FY19
STATE	6%	6%	5%	4%	5%	2%
Davidson	5%	6%	4%	5%	4%	2%
East Tennessee	8%	6%	5%	5%	5%	3%
Knox	6%	6%	7%	5%	3%	2%
Mid Cumberland	7%	7%	6%	4%	5%	2%
Northeast	6%	7%	6%	3%	6%	3%
Northwest	6%	7%	5%	4%	4%	2%
Shelby	6%	6%	4%	4%	4%	1%
Smoky Mountain	7%	6%	6%	5%	4%	3%
South Central	6%	7%	5%	4%	7%	3%
Southwest	3%	4%	3%	4%	3%	4%
Tennessee Valley	6%	6%	3%	3%	3%	1%
Upper Cumberland	8%	5%	5%	4%	5%	2%

The shaded column reflects censoring: not all children who were the subject of substantiated investigation in FY19 have had 12 months within which to experience another substantiated investigation. Overall, recurrence rates are fairly stable, ranging between three and eight percent (excluding FY19, which is heavily censored). At the same time, there is discernible regional variability within each fiscal year. Figure 15, below, shows recurrence rates by age.

Figure 12. Recurrence of Maltreatment, by Age and Fiscal Year



As reflected in Table 20, recurrence rates have been fairly stable over time, within the 3 to 8 percent range. Any differences between age groups are generally insignificant.

Admissions: Placement Rates

The focus in this section is on admissions to care. Recall that part of the TNDCS demonstration project involves the use of the FAST to better (and more quickly) identify families' needs so as to make the necessary linkages with community resources, thereby reducing the need for placement in foster care. First we look at differences in the placement rate by region between FY14 and FY19 (FY17 is censored).

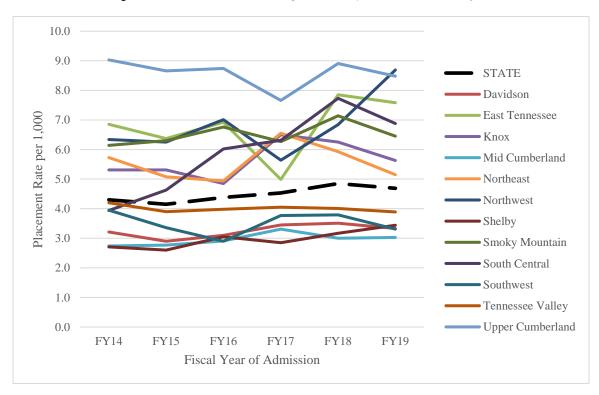
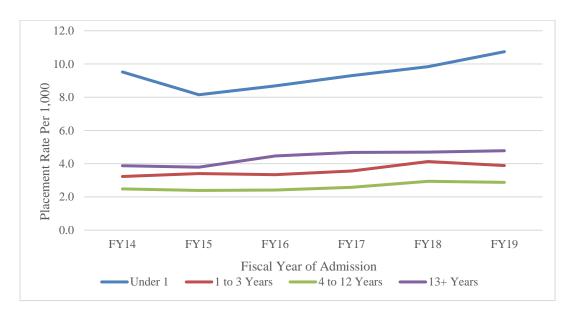


Figure 13. Placement Rate per 1,000, by Fiscal Year and Region

The black dotted line represents the statewide placement rate. Figure 17 makes clear the variation in admissions by region, with Upper Cumberland well above average (more placements per 1,000 children in Upper Cumberland compared to the state) and Mid Cumberland and Shelby below average (fewer placements per 1,000 children in Mid Cumberland and Shelby compared to the state).

There is also considerable variation in admission practices by age.

Figure 14. Placement Rate per 1,000, by Fiscal Year and Age at Entry



Year after year, the placement rate is considerably higher for babies compared to children age 1 and older. Four to 12-year olds have the lowest placement rate. Placement rates have been modestly but steadily on the rise over time; for babies, this trend is much more pronounced.

Placement stability

In this section we provide data related to the stability of children's placements. The focus is on children in the admissions groups: the demonstration-period entry cohorts and the comparison entry cohorts. We further hone in on children experiencing their first placement in care. We do this because the relative risk of placement disruption is often different for children in their subsequent spell.

In Table 21 (below) we look at the cumulative probability of an initial placement change for children in their first-ever spell. The rows represent the cumulative probability that children within each fiscal year entry cohort experienced an initial move within particular windows of time (columns).

Table 24. Cumulative Probability of Initial Move: First Ever Spell, by Fiscal Year of Entry

							1 - 180 +
	1 Day	1 - 7 Days	1 - 30 Days	1 - 60 Days	1 - 90 Days	1 - 180 Days	Days
FY14	10%	19%	27%	31%	34%	39%	48%
FY15	8%	16%	26%	32%	34%	41%	50%
FY16	12%	23%	30%	36%	39%	44%	53%
FY17	12%	21%	30%	34%	38%	43%	53%
FY18	13%	24%	32%	37%	40%	45%	52%

Generally, the probability of a child having their first ever placement experiencing a placement change within 180 days of their entry in care has gone up slightly over the past few years. In the figure below we see how the likelihood of experiencing a placement change varies depending on how old children are at the time they enter care.

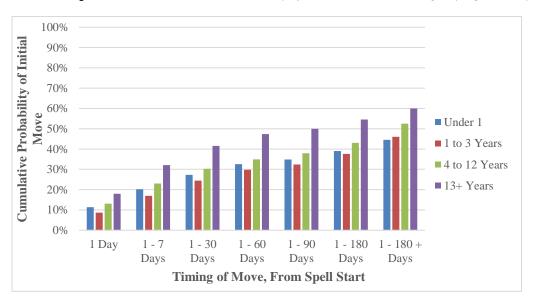
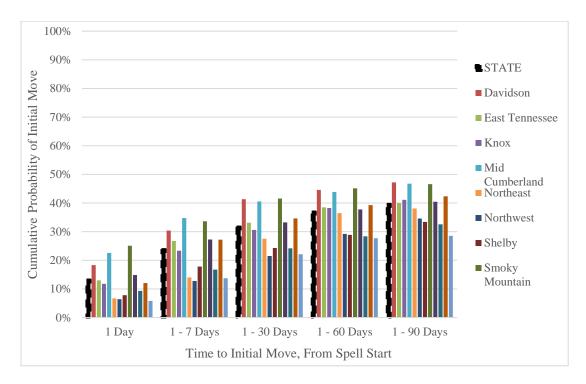


Figure 15. Cumulative Probability of Initial Placement Change, by Age at Entry

In Figure 19 we are looking at just one fiscal year: FY18. Teens are the most likely to move in any of the time intervals displayed; toddlers generally have the lowest probability. Approximately 60 percent of teens who entered care in FY18 experienced a move within 180 days of their placement; for toddlers, the figure is just above 45 percent.

We might also expect there to be regional variation in the likelihood that a child will experience an initial move – and within distinct intervals of time. Figure 20 provides the regional view, looking just at FY18.

Figure 16. Cumulative Probability of Initial Placement Change, by Region (FY1718)



The bold black line represents the statewide values. As with the placement rate, there is clear indication of regional variability in the likelihood that a child will experience an initial placement change in 90 days. Children experiencing their first ever placement in Mid Cumberland, Davidson, or Smoky Mountain appear to be more likely, on average, to experience an initial move within the first 90 days of their placement; children experiencing their first ever placement in Northwest or Upper Cumberland appear relatively less likely to experience an initial move within the first 90 days of their spell.

In general, this measure of placement stability is useful in that it points fairly clearly to the potential value in revisiting placement policies, in that a considerable proportion of moves are happening very early on – within the first 30 days of placement.

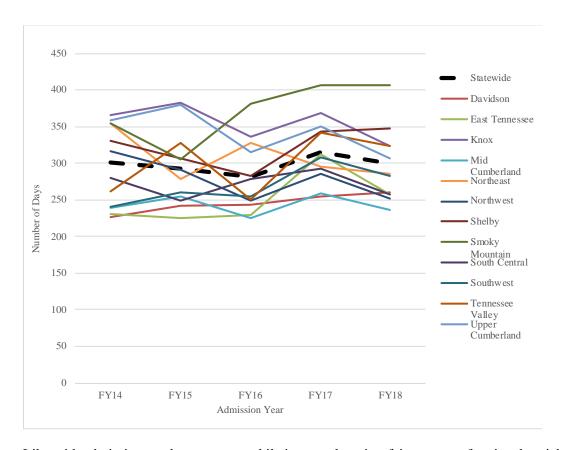
Permanency

In this section we look separately at children in the admissions/entry groups and children who were in care at the time the demonstration project took effect (the in-care group).

Admissions/Entry Cohorts. Permanent exits are typically defined as either reunification, discharge to relatives, or adoption. All other exit types are generally considered non-permanent exits.

The first measure of permanency is the median duration, or the number of days it takes 50 percent of each entry cohort to leave care. Figure 21 provides the regional view since FY14.

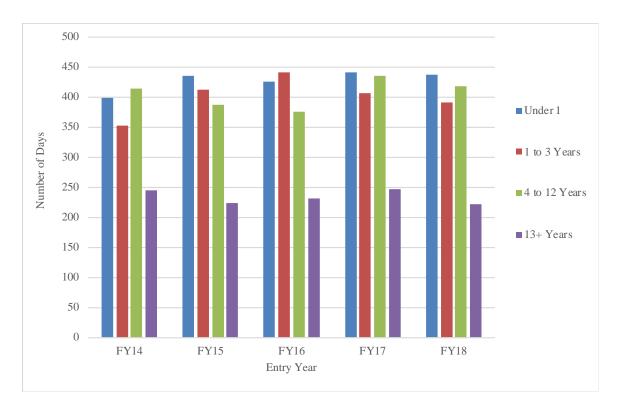
Figure 17. *Median Duration, by Fiscal Year of Entry and Region*



Like with admissions and movements while in care, there is a fair amount of regional variability in the length of time it takes 50 percent of an entry cohort to leave foster care. The regions also vary quite a bit year to year. The *general* trend, however, appears as follows: length of stay, as measured by median duration per entry cohort, was on a slight decline between FY14 and FY16. Median duration jumped up a bit for the FY17 entry cohort, and then back down again for the FY18 cohort.

There is also important variability in the number of days it takes children to leave care with respect to age; that is, how old children are at the time they enter care.

Figure 18. *Median Duration, by Fiscal Year of Entry and Age at Entry*



Teenagers consistently have the shortest median duration compared to the other age groups. Overall, median duration for children who enter care during their first year of life has been on the ride, from a low of 399 days for the infants who entered in FY14 to a high of 440 days for the infants who entered in FY17; the FY18 experience for infants was essentially the same. Median duration was also on the rise for children who entered as toddlers (between the ages of 1 to 3 years), from 350 days in FY14 up to 440 days in FY15. While median duration has been on the decline in recent years for children entering as toddlers, it is still above FY14 levels.

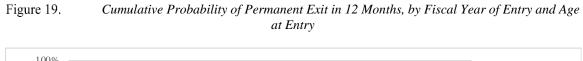
The second method used for understanding changes in lengths of stay over time is the cumulative probability. Data is organized around two main strata: age at entry and region. Table 18 presents the cumulative probability of a permanent exit in accumulating six-month intervals.

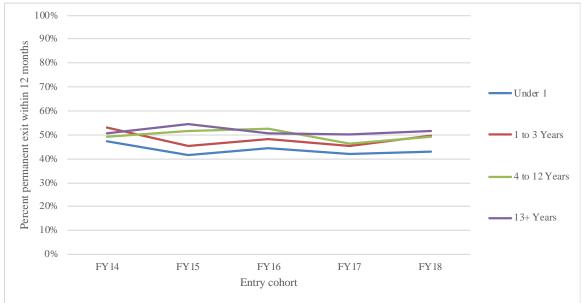
Table 25. Cumulative Probability of a Permanent Exit, by Fiscal Year of Entry and Age at Entry¹²

			Und	ler 1			1 to 3 Years					
	0-6	0-12	0-18	0-24	0-30	0-36	0-6	0-12	0-18	0-24	0-30	0-36
FY14	28%	47%	63%	77%	88%	93%	35%	53%	67%	77%	86%	91%
FY15	24%	42%	62%	77%	88%	93%	31%	45%	63%	76%	87%	91%
FY16	21%	44%	62%	76%	87%	92%	31%	48%	62%	74%	85%	91%
FY17	21%	42%	61%	75%	83%	86%	26%	45%	61%	72%	79%	80%
FY18	22%	43%	56%	60%	60%	60%	28%	50%	59%	62%	62%	62%
			4 to 12	2 Years			13+ Years					
	0-6	0-12	0-18	0-24	0-30	0-36	0-6	0-12	0-18	0-24	0-30	0-36
FY14	35%	49%	63%	74%	81%	86%	35%	51%	59%	64%	65%	67%
FY15	31%	52%	64%	75%	84%	89%	37%	55%	62%	66%	68%	69%
FY16	34%	53%	67%	76%	83%	88%	35%	51%	59%	62%	65%	67%
FY17	29%	46%	63%	73%	79%	80%	34%	50%	58%	62%	64%	65%
FY18	30%	49%	59%	62%	62%	62%	36%	52%	59%	60%	60%	60%

On average, just under 50 percent of children have a permanent exit within 12 months of entry. For teens the probability is slightly higher – between 50 to 55 percent. Figure 17 provides a clearer view.

¹² Shaded cells denote censoring.

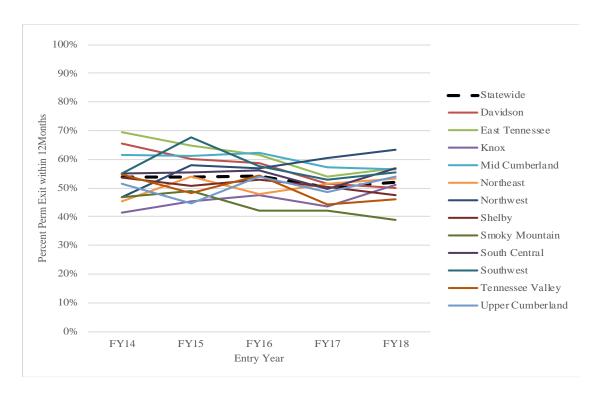




The overall picture is fairly stable, with the slight appearance of a very modest downward trend in the likelihood of a permanent exit from care within 12 months of entry.

Figure 18 provides the regional view.

Figure 20. Cumulative Probability of Permanent Exit in 12 Months, by Fiscal Year of Entry and Region



There is some clear regional variability in the extent to which children who enter foster care have a permanent exit within 12 months of their entry. For example, whereas Smoky Mountain's performance on this measure has steadily worsened over the five years displayed in Figure 18, Northwest's performance has steadily improved. Interestingly, in both regions, 47 percent of FY14 entrants had a permanent exit within 12 months. Yet for the FY18 entrants, just 39 percent of the Smoky Mountain entry cohort had a permanent exit within 12 months, while 63 percent of Northwest's entry cohort had a permanent exit within 12 months.

In-Care Groups. Children in the in-care groups have, of course, a varied set of experiences with regards to the "amount" of foster care they have accumulated as of July of the given in-care year. The median residual duration analysis, the results of which are presented below, take this reality into account.

Table 26. Median residual duration, in days, by in-care year and time in care

		, , ,			
			12-18	18-24	·
In Care Year	0-6 Months	6-12 Months	Months	Months	2+ Years
2010	2,824	3,457	3,487	2,665	3,448
2011	2,966	3,364	3,409	3,782	3,888
2012	3,331	3,807	3,231	3,306	3,286
2013	3,324	3,420	3,850	3,944	3,296
2014	3,512	3,416	3,537	4,065	3,991
	2010 2011 2012 2013	2010 2,824 2011 2,966 2012 3,331 2013 3,324	In Care Year 0-6 Months 6-12 Months 2010 2,824 3,457 2011 2,966 3,364 2012 3,331 3,807 2013 3,324 3,420	In Care Year 0-6 Months 6-12 Months 12-18 Months 2010 2,824 3,457 3,487 2011 2,966 3,364 3,409 2012 3,331 3,807 3,231 2013 3,324 3,420 3,850	In Care Year 0-6 Months 6-12 Months 12-18 Months 18-24 Months 2010 2,824 3,457 3,487 2,665 2011 2,966 3,364 3,409 3,782 2012 3,331 3,807 3,231 3,306 2013 3,324 3,420 3,850 3,944

Comparing the 2014 (demonstration-period) group to the preceding in-care years, we see a mixed set of findings in the number of days it took 50 percent of the in-care group to leave foster care, given the amount of time they had spent in care prior to July 1 of the in care year. The graphic view, in Figure 25, brings the narrative out a bit more clearly.

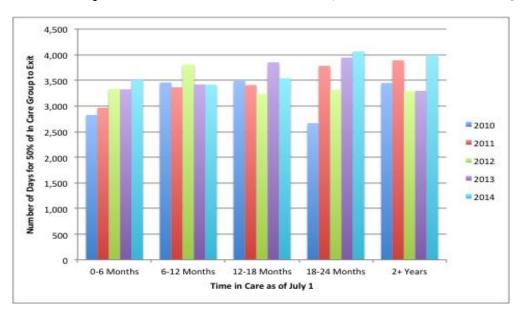


Figure 21. Median Residual Duration, by Time in Care and In Care Group

As just described, we see in Figure 25 the rising trend in the number of days it takes 50 percent of longer-stayers within each in-care cohort to leave foster care. The same holds true, albeit modestly, for children who were fairly new to foster care when July 1 hit (the 0-6 month group). At the same time, it has generally taken the same/less time for 50% of children who had been in care for 18 months or less as of July 1 of the given year to exit foster care.

Reentry

A single measure was used to monitor the extent to which children who exit from foster care reenter at some future date: the conditional probability of reentry, in six-month intervals. This is a useful way to think about reentry because it tells you not only how likely reentry is but when it is most likely to occur, so that TNDCS and its regional leadership can be strategic in the nature and timing of the support they offer. Table 20, below, displays the conditional probability of reentry for children in entry cohorts FY14 through FY18.

Overall, we see fairly low levels of reentry across the board. Children who exit as teens are consistently the most likely to reenter care.

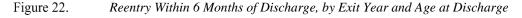
Table 27. Conditional Probability of Reentry, by Exit Year and Age at Discharge: Six-Month Intervals

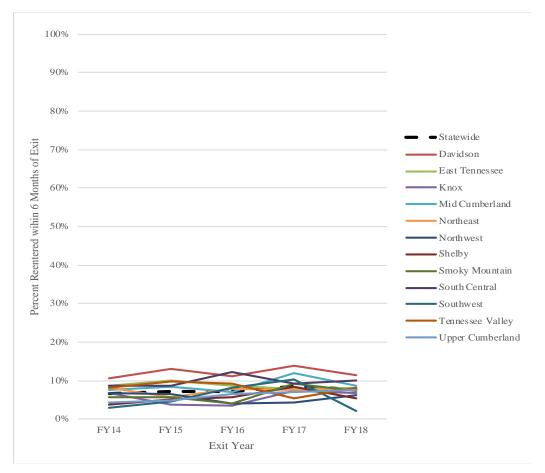
			Und	ler 1			1 to 3 Years					
Exit Year	0-6	7-12	13-18	19-24	25-30	31-36	0-6	7-12	13-18	19-24	25-30	31-36
FY14	4%	2%	3%	2%	1%	1%	3%	3%	3%	2%	1%	0%
FY15	3%	3%	1%	0%	0%	0%	3%	3%	2%	1%	3%	1%
FY16	3%	1%	2%	1%	0%	1%	2%	3%	2%	1%	0%	2%
FY17	3%	1%	2%	1%	0%	0%	3%	3%	2%	1%	0%	0%
FY18	1%	4%	1%	1%	0%	0%	3%	4%	2%	1%	0%	0%
			4 to 12	Years			13 to 17 Years					
Exit Year	0-6	7-12	13-18	19-24	25-30	31-36	0-6	7-12	13-18	19-24	25-30	31-36
FY14	3%	3%	3%	2%	1%	2%	8%	7%	5%	5%	3%	2%
FY15	4%	3%	3%	2%	2%	2%	9%	9%	7%	4%	4%	2%
FY16	4%	3%	2%	2%	2%	1%	7%	9%	8%	5%	4%	4%
FY17	3%	4%	3%	2%	2%	0%	10%	9%	5%	6%	3%	3%
FY18	5%	5%	2%	1%	0%	0%	9%	8%	5%	1%	0%	0%

Among all children and youth exiting care in the five most recent fiscal years for which we can observe a full year following exit, the proportion of children reentering care increased from 11 percent in FY14 to 14 percent in FY17 and then dropped slightly to 13 percent in FY18. For toddlers and children ages 4 to 12, the percentage of reentries in one year was higher in FY18 than in the four prior fiscal years.

•

Figure 22, below, shows the probability of reentry in 6 months, by exit year and region.





Again, we see low levels of reentry within six months. We also see the familiar regional variation, although for the most part, regions are fairly stable in their performance on this measure over time.

Care Day Count

The purpose of this section is to detail the utilization of care days by children eligible to participate in the Waiver demonstration program and a historical comparison group of children (children from previous entry cohorts who also meet the eligibility criteria for Waiver participation). As noted above, we do this separately for each cohort: admission cohort FY2015 through FY2019 compared to historical entry cohorts (FY11 through FY13).

FY2015 Entry Cohort.

We compare care day utilization for the FY2015 entry cohort with the average of three historical entry cohorts: FY2011, FY2012, and FY2013). Table 21, below, delineates the starting population – the number of children admitted in FY2015 (and the average number of entrants in three consecutive historical entry cohorts), broken down by the age at spell start. Starting with Year 2, the starting population represents the number of children from the original entry cohort still in care at the beginning of the performance (Waiver) year, and so on over the five Waiver years. For each group we report the percent that exited within that Waiver year. The percent exited is always the percent of the original starting population (from Year 1). Last, we report the total number of care days and the average number of care days.

Table 28. Exits, Average Care Days, and Total Care Days: FY2015 Admissions Cohort, by Age at Spell Start

			a		Percen	t Exited		a 5		
			Starting P	opulation	(% of I	nitial Pop)	Average	Care Days	Total (Care Days
Age at Spell	Waiver Year	Dates	D1"	A	D11	Actual	Baseline	Actual	D 15	Actual
Start	waiver Year	Dates	Baseline	Actual	Baseline	(th. 6/30/19)	Baseiine	(th. 6/30/19)	Baseline	(th. 6/30/19)
	Year 1	7/1/14 - 6/30/15	826	688	30%	26%	140	144	115,600	99,385
	Year 2	7/1/15- 6/30/16	581	510	36%	39%	266	275	154,864	140,080
Under 1	Year 3	7/1/16 - 6/30/17	403	242	22%	24%	237	234	66,622	56,619
	Year 4	7/1/16 - 6/30/18	224	78	9%	7%	212	231	21,803	18,027
	Year 5	7/1/18 - 6/30/19	152	28	1%	2%	228	228	6,949	6,372
	Year 1	7/1/14 - 6/30/15	1,591	1,306	35%	28%	129	130	205,545	169,273
	Year 2	7/1/15- 6/30/16	1,029	937	33%	35%	263	269	270,512	251,805
1 to 5 Years	Year 3	7/1/16 - 6/30/17	509	477	18%	21%	247	249	125,654	118,535
	Year 4	7/1/16 - 6/30/18	217	198	9%	9%	230	242	49,910	47,970
	Year 5	7/1/18 - 6/30/19	74	82	2%	3%	239	254	17,646	20,847
	Year 1	7/1/14 - 6/30/15	1,521	1,354	34%	30%	134	138	203,372	186,822
	Year 2	7/1/15- 6/30/16	1,005	954	34%	33%	260	273	261,054	260,140
6 to 12 Years	Year 3	7/1/16 - 6/30/17	481	512	15%	20%	267	265	128,963	135,889
	Year 4	7/1/16 - 6/30/18	255	246	8%	9%	276	257	69,978	63,231
	Year 5	7/1/18 - 6/30/19	138	121	6%	6%	290	279	39,850	33,799
	Year 1	7/1/14 - 6/30/15	3,365	2,836	42%	39%	130	133	439,133	377,671
	Year 2	7/1/15- 6/30/16	1,966	1,723	44%	47%	198	191	389,030	328,559
13 to 17 Years	Year 3	7/1/16 - 6/30/17	495	398	10%	9%	212	231	104,901	91,745
	Year 4	7/1/16 - 6/30/18	163	150	3%	3%	225	231	36,550	34,723
	Year 5	7/1/18 - 6/30/19	56	51	0%	0%	210	204	11,722	10,415

What has emerged is a situation in which total care day utilization is down for the FY15 group compared to the historical comparison group, but average care day utilization is slightly up for the FY 15 group compared to the historical comparison. This is due to the fact that fewer children were admitted in FY15 compared to the average number of admissions across the three historical entry cohorts. Figures 21 and 22, below, represent the situation fairly clearly.

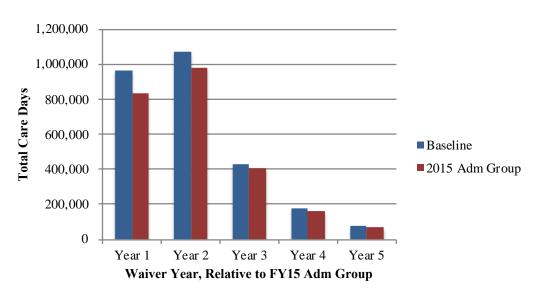


Figure 23. Total Care Days: FY15 Admissions Group and Historical Comparison (Baseline)

Particularly in the first two performance years (FY15 and FY16), the FY15 entry cohort used noticeably fewer care days as a group than did the three historical entry cohorts. The gap in their total care day utilization narrowed over time, however.

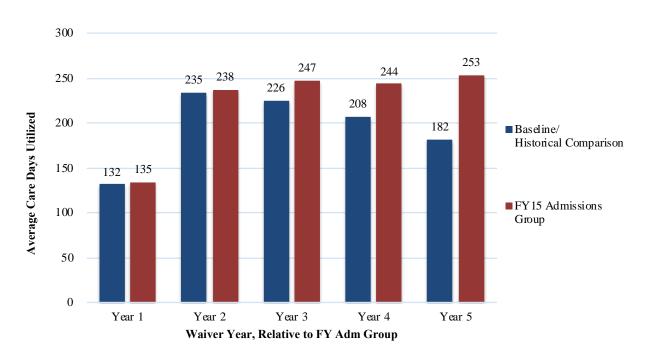


Figure 24. Average Care Days: FY15 Admissions Group and Historical Comparison (Baseline)

Children admitted during FY15 have used more care days, on average, compared to the average care day utilization of children admitted during FY11, FY12, or FY13. The difference is very slight in the first two years (FY15 and FY16), but widens over time.

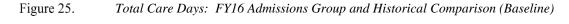
FY2016 Entry Cohort

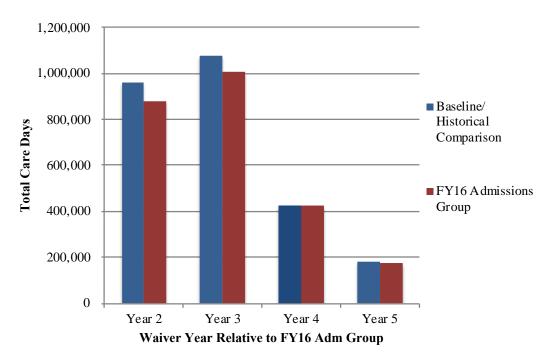
The observational window for the FY2016 entry cohort is one year shorter than for the FY2015 entry cohort.

Table 29. Exits, Average Care Days, and Total Care Days: FY2016 Admissions Cohort, by Age at Spell Start

			Starting 1	Population		t Exited litial Pop)	Average	Care Days	Total C	are Days
Age at Spell Start	Waiver Year	Dates	Baseline	FY16 Adm Group	Baseline	FY16 Adm Group	Baseline	FY16 Adm Group	Baseline	FY16 Adm Group
	Year 2	7/1/15- 6/30/16	826	724	30%	27%	140	156	115,600	112,694
Under 1	Year 3	7/1/16 - 6/30/17	581	526	36%	36%	266	272	154,864	142,986
Olider 1	Year 4	7/1/16 - 6/30/18	282	263	22%	23%	237	233	66,622	61,261
	Year 5	7/1/18 - 6/30/19	103	93	9%	9%	212	205	21,803	19,107
	Year 2	7/1/15- 6/30/16	1,591	1,265	35%	32%	129	141	205,545	178,741
1 to 5 Years	Year 3	7/1/16 - 6/30/17	1,029	856	33%	31%	263	281	270,512	240,610
1 10 5 1 ears	Year 4	7/1/16 - 6/30/18	509	459	18%	20%	247	255	125,654	117,001
	Year 5	7/1/18 - 6/30/19	217	209	9%	11%	230	223	49,910	46,710
	Year 2	7/1/15- 6/30/16	1,521	1,374	34%	32%	134	136	203,372	186,552
6 to 12 Voors	Year 3	7/1/16 - 6/30/17	1,005	939	34%	33%	260	266	261,054	249,727
6 to 12 Years	Year 4	7/1/16 - 6/30/18	481	489	15%	18%	267	264	128,963	129,263
	Year 5	7/1/18 - 6/30/19	255	241	8%	7%	276	285	69,978	68,676
	Year 2	7/1/15- 6/30/16	3,365	3,131	42%	40%	130	128	439,133	400,232
12 to 17 Voors	Year 3	7/1/16 - 6/30/17	1,966	1,863	44%	43%	198	200	389,030	372,341
13 to 17 Years	Year 4	7/1/16 - 6/30/18	495	523	10%	11%	212	223	104,901	116,811
	Year 5	7/1/18 - 6/30/19	163	190	3%	4%	225	221	36,550	41,904

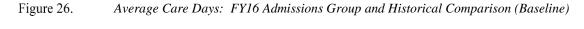
Across all age categories, the proportion of FY2016 admits who had a permanent exit within FY2016 was a bit lower than had been the case historically. These children also used slightly more care days, on average (and more care days, in total). However, over time performance evens out, on par with what had been observed previously. The one exception is with children who entered care in FY16 as toddlers (between the ages of 1 and 5 years), whose Year 3 and Year 4 performance, whose average care day utilization remains elevated. Figures 23 and 24 display the difference between total and average care day utilization for the FY16 admissions group over the four Waiver years in which they were able to be observed.

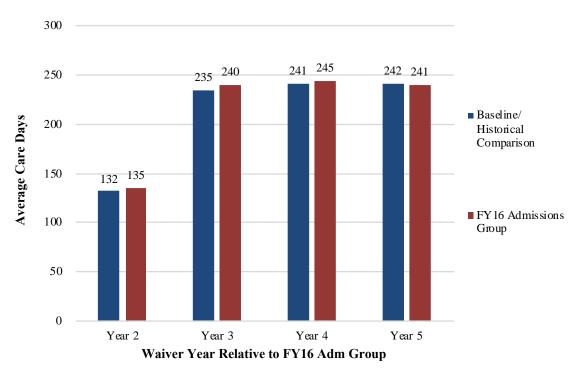




The FY16 admissions group used fewer care days during their first and second Waiver/performance years (FY16 and FY17). The difference in total care day utilization disappears in the third year (FY18, their third year) and starts to reverse in their fourth year following admission – the final Waiver year (FY19).

We see a similar picture emerge with respect to average care day utilization.





For the most part, children admitted in FY16 used the same number of days, on average, during each of the observed Waiver years. Their average care day usage is slightly higher in the first three years (FY16, FY17, FY18) and then starts to reverse in FY19, the final year of the Waiver.

FY2017 Entry Cohort

The children admitted during FY17 were able to be observed for approximately three years.

Table 30. Exits, Average Care Days, and Total Care Days: FY2017 Admissions Cohort, by Age at Spell Start

			Starting I	Population		Percent Exited (% of Initial Pop)		Care Days	Total Care Days	
Age at Spell Start	Waiver Year	Dates	Baseline	FY17 Adm Group	Baseline	FY17 Adm Group	Baseline	FY17 Adm Group	Baseline	FY17 Adm Group
	Year 3	7/1/16 - 6/30/17	826	778	30%	22%	140	149	115,600	116,292
Under 1	Year 4	7/1/17 - 6/30/18	581	610	36%	40%	266	273	154,864	166,389
	Year 5	7/1/18 - 6/30/19	282	296	22%	25%	237	237	66,622	70,013
	Year 3	7/1/16 - 6/30/17	1,591	1,363	35%	25%	129	140	205,545	190,408
1 to 5 Years	Year 4	7/1/17 - 6/30/18	1,029	1,016	33%	36%	263	270	270,512	274,072
	Year 5	7/1/18 - 6/30/19	509	522	18%	20%	247	264	125,654	137,832
	Year 3	7/1/16 - 6/30/17	1,521	1,467	34%	26%	134	140	203,372	205,202
6 to 12 Years	Year 4	7/1/17 - 6/30/18	1,005	1,082	34%	35%	260	274	261,054	296,058
	Year 5	7/1/18 - 6/30/19	481	573	15%	18%	267	272	128,963	155,658
12 . 17	Year 3	7/1/16 - 6/30/17	3,365	3,097	42%	39%	130	129	439,133	399,980
13 to 17 Years	Year 4	7/1/17 - 6/30/18	1,966	1,874	44%	42%	198	210	389,030	393,258
Years	Year 5	7/1/18 - 6/30/19	495	564	10%	11%	212	234	104,901	132,127

The FY17 admissions group performs differently than the prior entry cohorts that have been discussed. With this entry cohort, their early performance outshines that of the historical comparison cohorts. In later Waiver years, the performance of the FY17 cohort lags behind that of the historical comparison group. Figures 25 and 26 illustrate this.

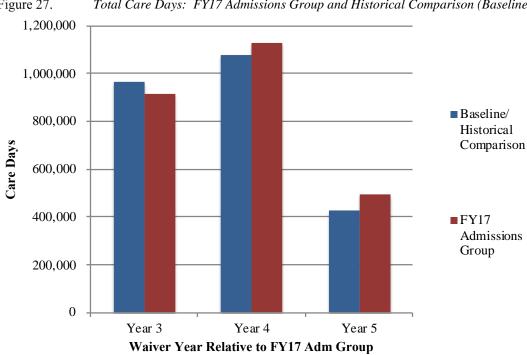


Figure 27. Total Care Days: FY17 Admissions Group and Historical Comparison (Baseline)

The FY17 cohort used slightly fewer care days during their initial performance year, which corresponds to Year 3 of the Waiver. Their total care day utilization exceeded that of the historical comparison group in the two years after their entry (Year 4 (FY18) and Year 5 (FY19) of the Waiver).

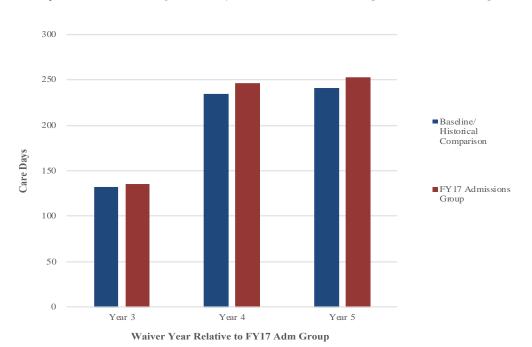


Figure 28. Average Care Days: FY17 Admissions Group and Historical Comparison (Baseline)

The children in the FY17 used slightly more care days, on average, than the children in the historical comparison group.

FY2018 Entry Cohort

The children in the FY18 entry cohort were able to be observed for approximately two years.

Table 31. Exits, Average Care Days, and Total Care Days: FY2018 Admissions Cohort, by Age at Spell Start

			Starting l	Population		t Exited itial Pop)	Average	Care Days	Total C	are Days
Age at Spell Start	Waiver Year	Dates	Baseline	FY18 Adm Group	Baseline	FY18 Adm Group	Baseline	FY18 Adm Group	Baseline	FY18 Adm Group
Under 1	Year 4	7/1/17 - 6/30/18	945	540	24%	17%	156	154	147,267	83,319
Olider 1	Year 5	7/1/18 - 6/30/19	721	446	17%	19%	319	312	229,643	139,350
1 to 5 Years	Year 4	7/1/17 - 6/30/18	1,140	697	33%	22%	140	150	158,130	104,259
1 to 5 Tears	Year 5	7/1/18 - 6/30/19	766	545	22%	24%	294	290	224,892	157,902
6 to 12 Years	Year 4	7/1/17 - 6/30/18	874	437	37%	28%	135	154	116,871	67,259
0 to 12 Tears	Year 5	7/1/18 - 6/30/19	551	314	23%	24%	285	286	156,479	89,704
13 to 17 Years	Year 4	7/1/17 - 6/30/18	496	214	33%	21%	138	154	68,380	33,054
13 to 17 Tears	Year 5	7/1/18 - 6/30/19	331	170	25%	24%	286	289	94,403	49,124

Across age categories, exits for the FY18 entry cohort during that first year lagged behind what was observed for the historical comparison group during the initial year of their entry. However, the proportion of the FY18 that exited in the year following entry (FY19) was on par with what was observed for the historical comparison group.

Figures 27 and 28 display care day utilization – total care days and care day utilization, on average.

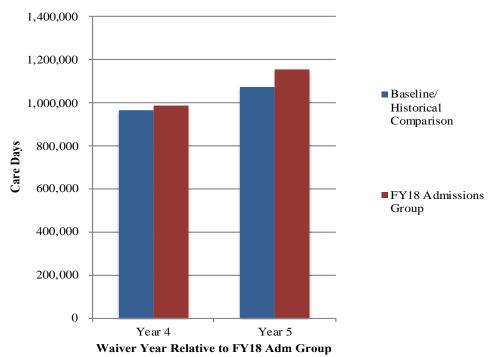


Figure 29. Total Care Days: FY18 Admissions Group and Historical Comparison (Baseline)

The FY18 admissions group used more care days overall than did the historical comparison groups, on average. The difference was fairly slight in the first year for the FY18 cohort (the fourth Waiver year) and a more pronounced difference in the second year (FY19).

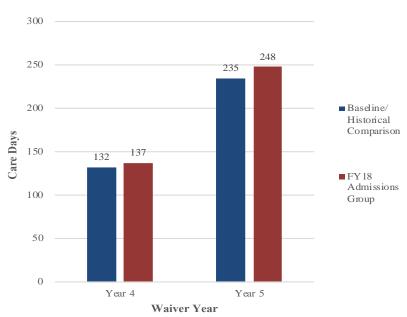


Figure 30. Average Care Days: FY18 Admissions Group and Historical Comparison (Baseline)

Similar to what was observed in the previous figure. Average care day utilization was a bit higher for the FY18 entry cohort compared to the historical comparison group for both of the observed Waiver years.

FY2019 Entry Cohort

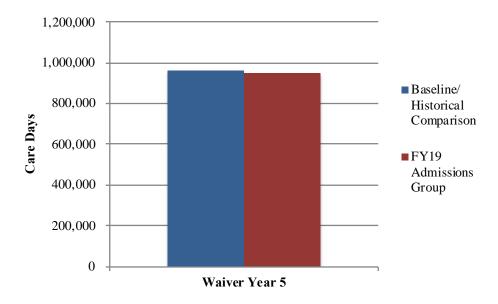
The FY19 entry cohort was observed for less than one year.

Table 32. Exits, Average Care Days, and Total Care Days: FY2019 Admissions Cohort, by Age at Spell Start

			Starting Population		Percent Exited (% of Initial Pop)		Average Care Days		Total Care Days	
Age at Spell Start	Waiver Year	Dates	Baseline	FY19 Adm Group	Baseline	FY19 Adm Group	Baseline	FY19 Adm Group	Baseline	FY19 Adm Group
Under 1	Year 5	7/1/18 - 6/30/19	826	897	30%	23%	140	145	115,600	130,149
1 to 5 Years	Year 5	7/1/18 - 6/30/19	1,591	1,469	35%	29%	129	136	205,545	199,928
6 to 12 Years	Year 5	7/1/18 - 6/30/19	1,521	1,655	34%	29%	134	145	203,372	239,444
13 to 17 Years	Year 5	7/1/18 - 6/30/19	3,365	2,927	42%	41%	130	129	439,133	376,174

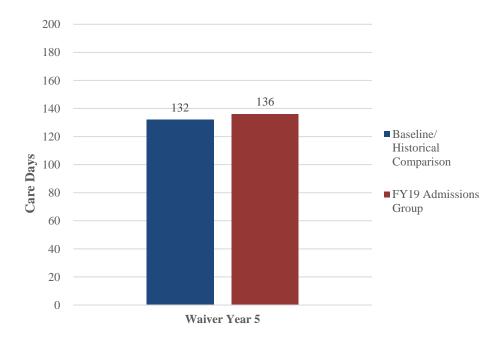
Across age groups, exits within this initial entry year were lower than what had been observed in the historical comparison group. Average care days were generally higher with the exception of teens. The extent to which total care days were in excess of what had been observed historically varied by age group.

Figure 31. Total Care Days: FY18 Admissions Group and Historical Comparison (Baseline)



The FY19 cohort used about the same number of care days during the initial entry year as did the historical comparison group, on average.

Figure 32. Average Care Days: FY18 Admissions Group and Historical Comparison (Baseline)



Members of the FY19 entry cohort used about the same number of days, on average, as did the children included in the historical comparison group during their initial entry year.

KEEP: Impact Analysis

Chapin Hall has examined the impact of KEEP on permanency outcomes at two points in time: first, in late 2017/early 2018, and again at the very tail end of the Waiver period. The purpose of the KEEP impact analysis is to gauge whether the likelihood of placement changes and permanent exits are affected by the implementation of KEEP. The unit of analysis is children in out of home care.

When measuring the impact of KEEP it is crucial to isolate confounding factors that can also influence placement changes and exit outcomes. This analysis used multiple analytic tools to deal with the range of confounding factors, which come from multiple sources: attributes of the child, attributes of the foster homes, county-level characteristics, and regional characteristics. Those analytic tools include the following. First, we adjusted for child-level clinical differences. Second, the fact that children are nested within counties was addressed in the model. Third, an intent-to-treat analysis was conducted to overcome potential KEEP home selection biases. Fourth, difference-in-difference and comparative interrupted time series modeling was used to address any remaining unobserved selection biases, including region selection bias.

Methodology

Adjusting for Child Clinical Differences. In order to address selection bias, the model first adjusted for child-level clinical differences. Child-level clinical differences (including child age, gender, race, previous care type history, current care type, and the length of current stay in care, placement reasons) were accounted for in the model framework to identify and isolate the impact of the KEEP program on placement changes/outcomes.

Discrete Time Hazard Model. Even if children have similar clinical attributes, placement changes/outcomes depend on how much time a child spends in the system after admission. As time passes the likelihood of experiencing a placement change or a permanency outcome changes. In order to account for the issue of time-variance, we also adjusted for differences in the amount of time children spend in care in the model. To do that, the observation period was calculated from the point of admission to the censoring date (7/1/2017 for the Time 1 analysis; 9/30/19 for the Time 2 analysis), maturity date (when children turn 18 years old), or the occurrence of certain key events.

Technically, the discrete time hazard model was employed to accommodate differences in the amount of time elapsed until the occurrence of certain events (either placement change or permanency). Discrete time hazard models offer a number of advantages over other types of event history techniques, especially the advantage of being readily adapted to a multilevel framework. Discrete time hazard models require dividing the time a child spends in care into intervals (three-month time intervals for this analysis), with one record per interval of time through the end of the observation window.

Multi-level Model. Children are nested within counties; from a modeling perspective this equate two a two-level data structure. That is, children in the same county often "behave" similarly to each other (in terms of trajectories) compared to children in other counties. To account for this nesting structure, we

adopted a county random effects model.¹³ Since we are dealing with only placements in DCS-licensed homes (not in private agency homes) we did not have to make use of an agency random effects model.

Intent-to-treat and Treatment-on-the-Treated. To measure the impact of KEEP, it is crucial to identify which children are considered the "treatment group." There are two different ways to define the treatment group: using an intent-to-treat (ITT) approach or the treatment-on-the-treated (TOT) approach. The ITT approach includes everyone in the initial program design regardless of whether they are actually exposed to the program or not. Conversely, the TOT approach includes only participants who actually received the program treatment.

Even though using ITT might be counter-intuitive, it is considered conservative and more robust because it overcomes the selection bias that comes from the implementation process. The direct recipients of the KEEP program are children in KEEP homes; at Time 1, this was restricted to homes located within the four original KEEP-implementing regions and at Time 2, to homes across the State. However, not all children were exposed to the KEEP program, even after implementation was underway. Further, the implementation periods are varied across the State. Further still, those children who were exposed to the KEEP program were not randomly selected. There is also suspicion that the foster parents who took up KEEP training were not random, either.

In order to overcome these various sources of potential selection bias the ITT model was adopted. The ITT model assumes that all children within KEEP-implementing regions participated in the treatment regardless of their actual participation. Because children who were not treated were part of the treatment group, attenuated (diluted) estimates may result; however, this approach is not affected by the aforementioned potential selection bias. Moreover, if statistically significant effects emerge despite the expected attenuation it only serves to strengthen confidence in the notion that the program has had an impact on reducing placement changes and/or increasing permanent exits from care.

Time 1 Impact Analysis

The Time 1 impact analysis covered the period through June 30, 2017. The analysis set December 2015 as the beginning of the KEEP period, to consider the incremental nature of actual program implementation. That left us with an observational window of approximately 18 months. As suggested above, the sample of children included in the analysis includes children who were already in care when KEEP was first introduced as well as children admitted to care after KEEP training began in the four target regions.

The results of the Time 1 impact analysis are presented in the form of odds ratios. Simply put, odds ratios are measures of relative effect. They convey the odds that a particular outcome will occur in the presence of an intervention (KEEP) relative to the odds that the same outcome will occur, absent the intervention. Ultimately, we looked at whether the difference between the odds of an outcome occurrence (placement change, permanent exit) in the presence of the intervention were significantly different than the odds of an outcome occurrence (placement change, permanent exit) in the absence of the intervention. For placement stability, we looked for lower odds in the KEEP condition (KEEP regions, KEEP period). For permanency, we looked for higher odds in the KEEP condition (KEEP regions, KEEP period).

¹³ The random effects model treats county effects as random (not fixed) and the randomness is captured by county random variables.

KEEP and Placement Stability. The first model we ran examined the extent to which we could identify an effect for KEEP on the likelihood that children will experience a move from one foster home to another. Of course, there are a number of factors that influence the likelihood that a child in custody will experience a placement change: their age, gender, ethnicity, past experiences with foster care, and the reason for their placement in care, to name a few. The technical summary attached at the end of this memo provides details on the extent to which these various factors "matter" when modeling the likelihood that a child will experience a placement change.

We also know that the likelihood that children will experience placement instability is affected by where they are placed (county and region effects) and when they are placed (time effects). The Department is well aware of the reality of regional variation in performance along a range of performance indicators; so, too, is the Department aware that performance can change over time. The analysis we performed also takes these factors into account when teasing out the so-called "KEEP effect" on placement stability. Again we would refer you to the technical summary at the end of this memo for additional details.

In sum, our task was to tease out the effect of KEEP on the likelihood that children will experience a placement change, taking into consideration the influence of these other attributes – those that are specific to children and those that are specific to their context (place and time). Findings are depicted in Figure 33, below.

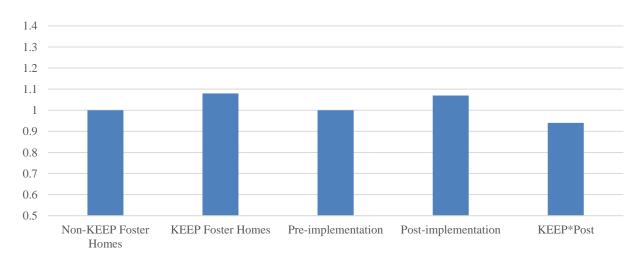


Figure 33. KEEP Effects on Placement Stability

These comparisons indicate the KEEP foster homes were generally somewhat less stable than non-KEEP homes; placement stability was somewhat greater in the post-KEEP period across the entire state; and the KEEP homes in post-KEEP era were somewhat more stable, but not significantly so.

KEEP and Permanency. The second model we ran as part of the analysis examined the effect of KEEP on the likelihood that a child would experience a permanent exit. As in the case of placement stability, the likelihood that a child will have a permanent exit from care (adoption, reunification, or discharge to a relative) is influenced by a range of variables, some specific to children and some specific to the context in which their placement in care occurs. For example, we know that how old a child was when they entered out-of-home care, their placement type during out-of-home care (regular family foster care, kinship care, congregate care), the reason for their placement in foster care, their history of prior foster

care placement, and the region in which they are placed all make a difference in determining the likelihood of one exit type over another. From an analytic standpoint our job was to determine, net of these other influences, what effect the implementation of KEEP had on the likelihood that a child would experience a permanent exit. The results are depicted in Figure 34.

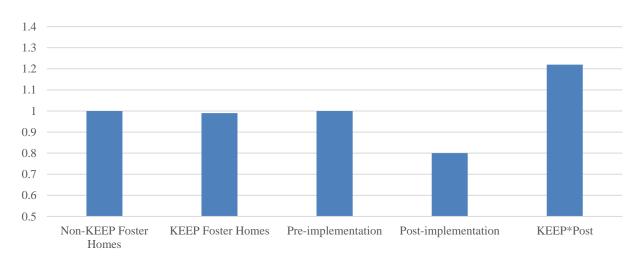


Figure 34. *KEEP Effects on Permanency*

These comparisons indicate that permanency rates in KEEP and non-KEEP were roughly similar; permanency rates in the post-implementation period were somewhat slower in the post-implementation period (which is consistent with overall trends) and the permanency rates were higher in the KEEP homes during the post-implementation period when compared to the all other homes and all other periods. This difference was statistically significant.

Summary: Time 1. Overall, the findings at Time 1 pointed to a positive effect for KEEP. Children in the KEEP regions during the KEEP period were less likely to experience a placement change, although this finding fell short of statistical significance. Children in the KEEP regions during the KEEP period were more likely to experience a permanent exit, a finding that did, in fact, rise to the level of statistical significance.

Time 2 Impact Analysis

At the end of the Waiver period, the evaluation team reexamined the extent to which KEEP may be exerting an impact on permanency outcomes. Because the implementation landscape had changed since the Time 1 analysis, with KEEP in all 12 regions but with much lower implementation rates, a different analytic approach was used. The new methodology and corresponding findings are described below.

Comparative Interrupted Time Series Model. The Interrupted Time Series (ITS) model looks at the deviation of the Intent-to-Treat (ITT) group after the introduction of an intervention. The ITS model used in this analysis has segmented time into two parts. The first segment represents the pre-intervention period, and the second segment represents the post-intervention period. The pre-intervention period serves as the baseline. The counterfactual is reflected by the intercept and slope of the post-intervention period, which is extrapolated into the post-KEEP period. ITS is a powerful way to overcome the selection bias that is undoubtedly inherent in the current analysis. Children in KEEP homes are expected to behave

similarly before KEEP implementation; thus, we are comparing pre-KEEP implementation to post-KEEP implementation.

Children in the ITT group were divided into two groups: those in care before 1/1/2016 and those in care after 1/1/2016. The rationale for this segmentation is that children eligible for KEEP had limited exposure to the program before 1/1/2016, with greater exposure opportunities after 1/1/2016. Thus, we have two distinctive types of person-periods: person-periods prior to KEEP implementation, and person-periods post-KEEP implementation. This separation of prior and post-KEEP is crucial to identifying and estimating the KEEP impact.

The specific type of ITS model used in this analysis is known as a Comparative ITS model (CITS). CITS looks not only at the deviation of the ITT group, but also the deviation of the comparison group, so as to better deal with other sources of selection bias. Policies, practices, or economic conditions that affect the likelihood of change in the desired outcome (here, permanency) can result in trend changes after KEEP was implemented. We observe whether there are deviations within the non-KEEP comparison group to rule out the potential influence of other confounding factors that can affect both groups. The specific impact of KEEP, then, is evaluated by observing whether there was a trend change after 1/1/2016. The rationale holds that any deviation in the comparison group reflects other "unobserved" factors that may also lead to trend shifts in the ITT group.

However, this model design is not completely immune to alternative interpretations, because other unique factors—besides KEEP implementation which only affects the ITT group—can change the trend after KEEP implementation. That said, it is unlikely that those other unique factors that affect outcomes for KEEP-eligible children would not also affect outcomes for the non-KEEP eligible children during the period of implementation.

Findings. In the CITS framework, we are interested in the difference between prior and post KEEP implementation periods. To assess the difference, we need to first account for existing trends in both the non-KEEP and KEEP groups, and then to measure the following two estimates: (1) the statistical estimate associated with children in KEEP homes, regardless of whether the time period was prior to or following the implementation period, and (2) the statistical estimate that reflects the difference between the prior-KEEP and post-KEEP periods, regardless of whether children were in KEEP homes or not. Once we adjust for any KEEP and non-KEEP differences (KEEP in Table 34) and any time related differences between prior and post KEEP implementation (Post in Table 34), we are in a position to estimate the KEEP impact.

As shown in Table 33, we have four categories: KEEP versus non-KEEP, and Prior vs. Post. The KEEP impact is measured by the interaction term between the two indicators KEEP and Post.

Table 33. *Keep and Post framework*

	Prior	Post
KEEP	KEEP homes prior to implementation	KEEP homes post-implementation
Non-KEEP	Non-KEEP homes prior to implementation	Non-KEEP homes post-implementation

As shown in Table 34 (below), the non-KEEP trend is generally upward (logit=.010) and the KEEP trend is relatively higher than the non-KEEP trend (logit=.091). Overall, the KEEP group (logit=-1.475) has lower likelihood of permanency compared to the Non-KEEP group. Post-implementation periods, in general, have a higher likelihood of permanency (logit=.102) than prior-implementation periods.

After accounting for all the covariates, we can measure the KEEP impact by the interaction term of KEEP and Post. The logit estimate of KEEP impact (KEEP*Post) is 0.291, with an odds ratio of 1.338. This indicates an increased likelihood of permanency; however, the estimate was not statistically significant (p-value= .093). Therefore, the Time 2 finding on whether KEEP increases the likelihood of permanent exits is, at this time, inconclusive.

Table 34	Permanency	Estimates

Tab	le 34. Permanei	ncy Estimate	S
Effect	Estimate	Error	$\mathbf{Pr} > \mathbf{t} $
D1	-2.811	0.112	<.0001
D2	-2.995	0.113	<.0001
D3	-2.959	0.114	<.0001
D4	-2.310	0.111	<.0001
D5	-2.011	0.111	<.0001
D6	-1.856	0.112	<.0001
D7	-1.747	0.114	<.0001
D8	-1.545	0.115	<.0001
D9	-1.257	0.116	<.0001
D10	-1.231	0.120	<.0001
D11	-1.186	0.125	<.0001
D12	-1.221	0.133	<.0001
ag1	-0.016	0.080	0.837
genderm	0.004	0.026	0.891
racebl	-0.282	0.047	<.0001
racehi	-0.150	0.062	0.016
cohsa_miss	-0.526	0.035	<.0001
contract_miss	0.291	0.085	0.001
plsuba	0.193	0.036	<.0001
plneg	0.102	0.035	0.004
plcbp	0.201	0.074	0.006
plphy	-0.095	0.065	0.142
plsxa	-0.077	0.100	0.441
mn_hlth_d	-0.097	0.038	0.010
mnchdpro_d	-0.238	0.035	<.0001
mnfampro_d	-0.131	0.039	0.001
mnpbsext_d	-0.294	0.039	<.0001
mnpbsint_d	-0.114	0.040	0.005
mnpbssex_d	-0.232	0.053	<.0001
spell2more	-0.080	0.042	0.055

Effect	Estimate	Error	Pr > t
age2	-0.092	0.041	0.025
age3	0.120	0.051	0.018
age4	0.010	0.060	0.863
age5	0.151	0.060	0.012
trt	-1.475	0.134	<.0001
trend	0.010	0.004	0.007
trt*trend	0.091	0.009	<.0001
post	0.102	0.055	0.063
trt*post	0.291	0.173	0.093

Impact of KEEP: Summary

About mid-way through the Waiver period, Chapin Hall evaluated the extent to which KEEP was having its intended effects on permanency. At that time, implementation was still concentrated on the East Grand Region, and implementation levels were low but encouraging. A positive effect for KEEP on permanency was identified that reached the level of statistical significance. We revisited the impact analysis at the end of the Waiver, about two years later. While the statistical estimate for KEEP was in the right direction (positive, not negative), it did not rise to the level of statistical significance.

In order for DCS to get a good read on whether KEEP is having its intended effects on children's permanency outcomes, there needs to be a greater saturation of KEEP, both amongst eligible foster parents and for eligible children. With implementation levels as low as they are now it may not be the right time to determine one way or another whether KEEP "works."

Cost Study

Introduction

As discussed earlier in this report, the general purpose of the federal government granting Title IV-E Waivers was to provide jurisdictions the opportunity to use Title IV-E funds more flexibly on behalf of children and families. As part of its Waiver initiative, TNDCS agreed to replace fee-for-service Title IV-E reimbursement with a fixed payment. Like other Waiver-involved jurisdictions, TN is trading guaranteed, unlimited, fee-for-service federal contributions for IV-E eligible children in exchange for a fixed amount of money that can be used for all child welfare services for any child, regardless of their eligibility. The fixed amount of money provided is intended to be the same amount as what TN would have received under normal Title IV-E reimbursement rules (i.e.: in the absence of the Waiver). The allocation amount is based on historical average foster care maintenance costs from for federal fiscal years 2012 through 2013 and foster care administrative costs from federal fiscal years 2010 through 2012.

The basic thesis underlying TN's Waiver project was that the constellation of interventions made possible through the flexible use of Title IV-E funds would improve child safety, permanency and well-being. Theoretically, these outcomes would reduce overall foster care spending. There are several ways to achieve a reduction in foster care spending: by reducing the number of children coming into care, by moving children out of care more quickly, and/or by reducing the cost of placements, most likely through the utilization of less expensive types of placements. Whether this reduction in foster care spending happened and the impact of any observed changes had on other child welfare spending is the basis of the discussion below.

As detailed earlier in this report, TN agreed to implement three interventions (and one implementation support, R3) as part of its Waiver initiative, which went into effect on October 1, 2014, one quarter into state fiscal year 2015:

- 1. FAST: A standardized risk assessment protocol administered to all families coming into contact with non-custodial program areas
- 2. KEEP: An evidence-based program that provides support and education to foster and kinship parents
- 3. NPP: An evidence-based parenting education program
- 4. R3: An evidence-informed implementation support model that provides guidelines for supervisors in their interactions with caseworkers and, subsequently, caseworkers interacting with parents/caregivers

It is important to note that all interventions were not rolled out throughout the entire state. As of the end of 2018, KEEP was implemented in all 12 regions. R3 was implemented in 10 select counties within four of the twelve regions, but was discontinued in June 2018. The FAST, on the other hand, was rolled out statewide for staff working in all non-custodial program areas. NPP went into effect in the fall of 2017 and has been implemented in six regions.

This cost study will explore questions related to spending patterns before and during the Waiver. This is a system level study (as opposed to a regional or county-based view) that presents the analysis of fiscal

expenditure data collected from state fiscal years (SFY) 2012 - 2019. First, the cost study provides a description of TN's funding structure and gives some background on how the Waiver was intended to impact spending. Then, we provide an overview of the data sources used for this portion of the study along with an explanation of our analytic methods. This is followed by findings related to overall child welfare spending, foster care spending, and the unit cost of foster care.

Background

Tennessee's child welfare system is state-administered by the Department of Children's Services (DCS). Child welfare services are provided by a combination of state and private entities while DCS maintains sole responsibility for child protection investigations. Under a Performance Based Contracting system that was phased in over three years, starting in SFY07, private providers in TN receive base contract payments on top of which they are paid incentives (or are charged penalties) for their performance on select measures. The contracts are intended to incentivize reductions in average care days provided these are achieved through exits to permanency that are maintained over time. While this arrangement is not tied to the Waiver directly, it is important to keep in mind because it demonstrates TN's familiarity with the benefits of flexible funding, and their early interest in developing financing structures that incentivize the outcomes state leadership was seeking for children entering foster care – namely timely permanency.

According to their most recent Annual Report, TNDCS managed a budget of \$801,313,100 in SFY18.¹⁵ Funding for TNDCS is derived from both federal and state sources; no local dollars are used. Per the most recent annual report with a breakdown of TN's revenue sources (SFY16), state appropriations made up 43 percent of total budgeted funding in SFY16. Federal funds, including Title IV-E, Title IV-B, and Social Services Block Grant made up 21 percent of total budgeted revenue. TennCare, which is the state of Tennessee's Medicaid program, contributed 34 percent of revenue while the remaining 2 percent was covered by other sources (i.e.: non-governmental, education funding).¹⁶

The cost study primarily answers research question of whether the fiscal stimulus of the Waiver and the associated service interventions had an effect on statewide expenditure patterns. To answer this question, evaluators collected expenditure and revenue data from TNDCS dating back eight full fiscal years. The cost study presents the analysis of fiscal data collected from state fiscal years 2012, 2013, and 2014 (13 quarters prior to the beginning of the Waiver) through state fiscal years 2015, 2016, 2017, 2018, and 2019 (18 quarters into the Waiver). Data collected allows for the evaluation of child welfare revenue and spending patterns prior to and through the Waiver demonstration period. As part of the system-level expenditure analysis, the cost evaluation identifies and examines spending associated specifically with foster care.

The study examines foster care spending relative to care type. An analysis of paid care days by placement type allows for the calculation of unit cost and the observation of change over time (in paid care days, unit cost, and foster care spending) – this, of course, set against a backdrop of Title IV-E revenue. Since a goal

¹⁴ Tennessee's fiscal year runs from June through July. For example, state fiscal year 2019 ran from June 2018 through July 2019.

¹⁵ Tennessee Department of Children's Services Annual Report, State Fiscal Year July 2017 – June 2018. Issued November 2018 by Tennessee Department of Children's Services.

¹⁶ Tennessee Department of Children's Services Annual Report, State Fiscal Year June 2015 – June 2016. Issued December 2016 by Tennessee Department of Children's Services.

of the Waiver was to increase permanency and reduce reentry, it would follow that foster care spending would be reduced as well. We would expect to see a reduction in foster care spending commensurate with a reduction in care days. The following sections explore this in more detail.

Data Sources

The central task of this analysis was to create and populate a database including all child welfare expenditures. The TN Cost Study database represents all child welfare related revenue and expenditures for the past eight full fiscal years, SFY 2012 through SFY 2019. The database's structure contains the flexibility to compare financial data within TN, across fiscal years, and within specific expenditure categories.

There are typically a set of qualitative data collection activities that precede the collection of fiscal data for a cost study of this nature. In this circumstance, the need for that work was minimal. Through collaborative work on TN's Performance Based Contracting initiative as well as other projects, Chapin Hall has a rich history of involvement with TNDCS and, in particular, the fiscal department. As such, researchers have a deep understanding of the financing structure in TN and the need for collection of qualitative data, as is customary in these types of evaluations, was minimal.

For the cost study, researchers received comprehensive expenditure information from fiscal administrators, which had been downloaded directly from TNDCS' financial management system, Edison. The information was deemed to be highly reliable as it is used for claiming purposes and also serves as the basis of payment. Data dictionaries were provided as well and utilized for categorization purposes.

Methodology - Data Categorization

The TN fiscal analysis began with a simple categorization of costs into categories. For the purpose of the study, seven major categories are included:

Out of Home (Board and Maintenance).¹⁷ When children are removed from their homes due to abuse or neglect, TN manages the case in one of two ways: 1) they contract with private agencies to provide foster care services, including residential care or; 2) they provide foster care services directly through DCS-licensed foster homes. Out of home (OOH) board and maintenance costs include payments provided to foster parents or private providers, depending on how the case is being managed, for each day a child is in their care. It covers child related costs such as food, clothing, shelter, daily supervision, school supplies, personal incidentals, and travel.

Out of Home (Other). This category includes all OOH expenditures not captured under the OOH board and maintenance category. These expenses are related to children served in juvenile justice (JJ) facilities, agency grants and contracts, and employee-related training and benefit costs.

In-Home Purchased Services (Preventive). Broadly speaking, the goal of in-home services is to either avert the need for foster care placement or to expedite the discharge of children from foster care and the reunification with their families. These services are provided to children, and family members of children,

¹⁷ This category includes spending in Custody Services (35930) with Account Description "Pymnts Foster ChildC&AdoptnAst."

who are at highest risk of coming into state custody. These services include child advocacy center services, family support services, relative caregiver services, and child abuse prevention services. Services in this category are provided exclusively by private providers. Other in-home costs – related to children who are receiving non-custodial services provided by DCS – are captured in the case management category (below).

Case Management. This category captures expenditures for regional office staff and field staff providing services to custodial children, adoption services, non-custodial case management, and child protective services investigations.¹⁸

Adoption. Adoption expenditures represent payments for special needs adoption assistance, adoption recruitment and placement services, and pre- and post-adoption support services.

Administration. Includes expenditures associated with TNDCS overseeing and managing the entire child welfare system. For example, the Commissioner's Office and the administration of the divisions of Child Programs, Child Safety, Child Health, and Juvenile Justice. Other central office administrative functions are included as well, such as: Human Resources, Facilities Management, Information Technology, Legal Services, and Finance and Budget.

Other. This category includes Major Maintenance, Needs Assessment, and Unknown expenses.

Dependent Variables

Using the data available, the research team examined the following dependent variables:

1. Total child welfare spending

Total foster care expenditures

- 2. Paid placement days
- 3. Average daily cost of foster care placement (total board and maintenance expenditures divided by paid placement days)

For each dependent variable listed above, we present the indicator across eight fiscal years. Since TN's Waiver went into effect on October 1, 2014, available cost data covers a little more than three years prior to the Waiver and about five years since the Waiver was implemented.¹⁹

Inflation Adjustment

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¹⁸Researchers were unable to disaggregate case management expenses and apportion among out of home, in home, and the adoption categories. We proceed with the analysis with the caveat that some expenses in each of those three categories are captured herein.

¹⁹ Because the fiscal data provided was on the state fiscal year, researchers were unable to adjust the reporting periods to the federal fiscal year to coincide with the Waiver start and end dates. As a result, all data in the subsequent portion of the report are on the state fiscal year, understanding that there is a one-quarter shift on either side of the five-year Waiver period (one quarter prior to the start of the Waiver and one quarter prior to the end of the Waiver).

An adjustment for inflation has been made to allow comparability of expenditures across years. All expenditures and revenues, unless otherwise noted, have been adjusted to real costs using SFY19 dollars as the base year and adjusting previous years' expenditures by the Consumer Price Index (CPI).²⁰

Findings

As discussed previously, under the Waiver agreement, TN was able to retain IV-E funding after covering traditional IV-E expenditures and use it for other child welfare purposes. As a result, the expectation was that TN would act to reduce foster care expenditures in ways that improve outcomes for children and families. By making programmatic changes and investing flexible funds, TN could potentially reduce the length of stay in foster care, reduce reentry, and reduce the use of high-cost placements. The savings generated as a result of the Waiver are meant to be reinvested in child welfare services other than foster care, resulting in a continued decline in the need for foster care. Below we explore this theory of change and the fiscal implications.

Total Child Welfare Spending

Figure 34 and Table 26 display all child welfare spending in TN for the past eight full state fiscal years. As detailed above, the data are organized around seven major categories used to separate spending types and are presented as both real (adjusted for inflation) and nominal (unadjusted for inflation) costs.

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²⁰ United States Department of Labor. (2020, Feb.). Consumer Price Index. Bureau of Labor Statistics. Retrieved February 17 from http://www.bls.gov/cpi/. Constant costs are calculated using the following equation: Current Year Real Cost = (Base Year CPI/Current Year CPI)*Current Year Nominal Cost. All constant costs are converted into SFY 2019 dollars, so the Base Year is SFY 2019. The CPI for SFY 2019 is calculated by taking the average CPI of the monthly CPIs for the period July 2018 through June 2019.

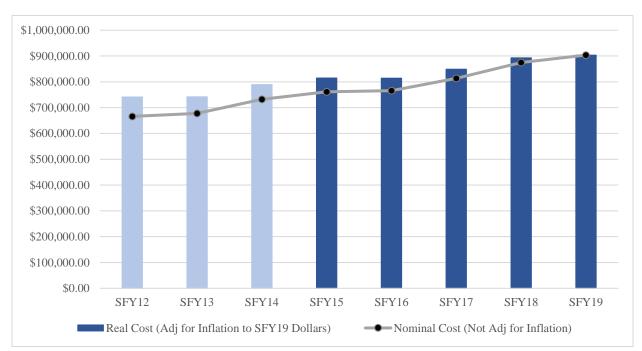


Figure 35. Total Child Welfare Expenditures: Real and Nominal Costs by SFY (in Thousands)

During the Waiver, total child welfare expenditures steadily increased through SFY19. Total child welfare expenditures in SFY19 have increased by 15 percent from SFY14 levels and by 22 percent from SFY12 levels, after adjusting for inflation. It is important to note that this spending includes the costs of Waiver interventions.

Table 35. Total Child Welfare Spending in Thousands, by Major Category and State Fiscal Year (Adjusted for Inflation)

Table 33, Total Onic	Table 35. Total Chita Weijare Spending in Thousands, by Major Category and State Fiscal Tear (Adjusted for Inflation) Total by Major Category									
]	Pre-Waiver Year	s			Waiver Years				
	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19		
OUT OF HOME - FC B & M	\$230,100	\$242,874	\$262,282	\$280,992	\$291,175	\$312,802	\$349,000	\$360,288		
OUT OF HOME - OTHER	\$71,712	\$75,214	\$72,523	\$71,074	\$58,692	\$61,020	\$53,999	\$51,104		
IN-HOME	\$42,901	\$39,944	\$44,079	\$46,345	\$40,081	\$40,584	\$41,074	\$41,533		
CASE MGMT*	\$242,771	\$233,434	\$252,439	\$256,088	\$262,218	\$269,088	\$279,295	\$276,676		
ADOPTION	\$94,392	\$87,094	\$94,211	\$94,960	\$100,135	\$105,037	\$107,447	\$109,865		
ADMIN	\$52,211	\$55,843	\$56,808	\$59,473	\$56,143	\$55,146	\$56,132	\$60,428		
OTHER**	\$7,155	\$7,446	\$6,667	\$5,413	\$5,555	\$5,203	\$5,621	\$3,600		
TOTAL CW SPENDING	\$741,242	\$741,849	\$789,009	\$814,346	\$813,998	\$848,881	\$892,570	\$903,494		
	"	F	Proportion by Maj	or Category						
OUT OF HOME - FC B & M	31%	33%	33%	35%	36%	37%	39%	40%		
OUT OF HOME - OTHER	10%	10%	9%	9%	7%	7%	6%	6%		
IN-HOME	6%	5%	6%	6%	5%	5%	5%	5%		
CASE MGMT*	33%	31%	32%	31%	32%	32%	31%	31%		
ADOPTION	13%	12%	12%	12%	12%	12%	12%	12%		
ADMIN	7%	8%	7%	7%	7%	6%	6%	7%		
OTHER**	1%	1%	1%	1%	1%	1%	1%	0%		
TOTAL CW SPENDING	100%	100%	100%	100%	100%	100%	100%	100%		
		Anı	nual Change by M	lajor Category						
OUT OF HOME - FC B & M		6%	8%	7%	4%	7%	12%	3%		
OUT OF HOME - OTHER		5%	-4%	-2%	-17%	4%	-12%	-5%		
IN-HOME		-7%	10%	5%	-14%	1%	1%	1%		
CASE MGMT*		-4%	8%	1%	2%	3%	4%	-1%		
ADOPTION		-8%	8%	1%	5%	5%	2%	2%		
ADMIN		7%	2%	5%	-6%	-2%	2%	8%		
OTHER**		4%	-10%	-19%	3%	-6%	8%	-36%		
TOTAL CW SPENDING		0%	6%	3%	0%	4%	5%	1%		

^{**}Other includes Major Maintenance, Needs Assessment, and Unknown

The largest increase in annual expenditures took place in SFY14, the year before the Waiver was being initiated. During the Waiver, the 15 percent increase in overall expenditures from SFY14 to SFY19 was driven primarily by increases in OOH board and maintenance expenditures. These OOH board and maintenance expenditures both saw a total expenditure increase in each year of the Waiver as well as an increase in their proportion of total child welfare expenditures. This change in proportion is explored in the following section.

Other expenditure categories experienced a shift as well. In-Home purchased services declined by 6 percent over the course of the Waiver while Adoption and Case Management expenditures grew by 17 and 10 percent respectively.

Interestingly, when we look at both types of OOH spending, we see that while board and maintenance increased, other OOH costs decreased. This dynamic, and the impact it is having on the unit cost of foster care, is explored below.

Out of Home Board and Maintenance Spending

Here we look specifically at spending related to OOH board and maintenance, which makes up the largest portion overall of out of home expenditures during the Waiver years. OOH board and maintenance captures payments made on behalf of a child in foster care to cover expenses such as food, clothing, shelter, daily supervision and personal incidentals. Payments are made directly to foster parents or, in other cases, to private provider agencies.

The question here is the extent to which the proportion of OOH board and maintenance expenditures as a percent of total child welfare expenditures, changed as a result of the Waiver. We see in Table 26, above, that the proportion of OOH board and maintenance expenditures increased over the course of the Waiver. In SFY14, the OOH board and maintenance expenditure category made up 33 percent of total child welfare costs, and in SFY19, that proportion had grown to make up 40 percent of total child welfare costs.

There were three options for explaining how this occurred: the relative proportion of OOH board and maintenance spending could have increased by decreasing all other child welfare expenditures, increasing OOH board and maintenance expenditures, or some combination of both. As we can see in Table 27 below, TN experienced both a steady increase in OOH board and maintenance and an increase in other child welfare expenditures.

Table 36. OOH Board and Maintenance as Percent of All Child Welfare Spending, by Fiscal Year (Adjusted for Inflation; Dollar amounts in Thousands)

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19
Foster Care Board and	\$230,100	\$242,874	\$262,282	\$280,992	\$291,175	\$312,802	\$349,000	\$360,288
Maintenance								
All Other CW	\$511,142	\$498,975	\$526,727	\$533,354	\$522,823	\$536,079	\$543,570	\$543,206
Expenditures								
% FCB&M (of Total	31%	33%	33%	35%	36%	37%	39%	40%
CW Expenditures)								
% FC B & M Change		6%	8%	7%	4%	7%	12%	3%
% All Other Change		-2%	6%	1%	-2%	3%	1%	0%

However, while overall child welfare spending and OOH board and maintenance spending have both increased over the Waiver period, the increase in OOH board and maintenance has outpaced the increase in other categories (see Figure 35).

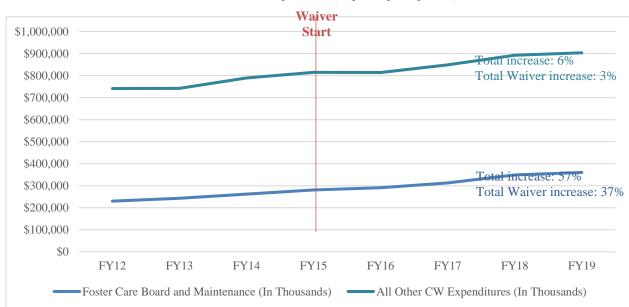


Figure 36. Changes in OOH Board & Maintenance and All Other Child Welfare Expenditures – Costs by SFY in Thousands of Dollars (Adjusted for Inflation)

With the increase in OOH board and maintenance spending, it is worth examining the sub-categories which make up the overall costs of OOH board and maintenance spending. The overarching question here is how shifts in the costs of various placement and payment types impacted the Waiver increase of OOH board and maintenance expenditures.

The cost study database breaks OOH board and maintenance spending into five main categories:

- 1) Residential Residential expenses which are related to children placed in congregate care settings such as group homes or other institutions
- 2) DCS FP Payments DCS Foster Parent Payments which are payments made directly to foster parents
- 3) IL Independent Living payments
- 4) Adopt/Guard Adoption/Guardianship payments which include payments for the Kinship Guardianship Assistance Program (KinGAP)
- 5) Other Other expenses such as specialized programs.

The first two categories (Residential and DCS FP Payments) account for nearly 100 percent of OOH board and maintenance spending for SFY12 through SFY15 and more than 90 percent of spending for SFY16 through SFY19. The large increase in Adoption and Guardianship payments starting in SFY17 is attributable almost entirely to KinGAP payments.

As to which OOH board and maintenance sub-categories drove the overall increase, the answer is clearly Residential. From SFY14 to SFY19, Residential maintenance costs increased by 37 percent. Due to this sharp increase and the fact that they make up the vast majority of OOH board and maintenance costs,

Residential maintenance costs fueled the rise of the overall OOH board and maintenance spending, despite a decrease in DCS FP Payments, which declined by 15 percent from SFY14 to SFY19 (Figure 37).

It is also worth noting that 'Other' expenses experienced a sharp increase from FY15 (\$4,962) to FY16 (\$21,961,827). This category includes programs called Child and Family Well Being as well as a Child Permanency Program. Although we were not able to disentangle program-specific expenses from the overall 'Other' total, we speculate that there may be some 'Other' expenses that were unable to be otherwise allocated, but are actually attributable to the first years of KinGAP and Independent Living payments (FY16) made under the Waiver. If so, that would explain the significant increase. Adoption/Guardianship and Independent Living each had a large increase in SFY17, and if a portion of the expenses from the 'Other' category during FY16 are attributable to those categories, the spike in 'Other' expenditures in SFY16 would be explained.

Table 37. Board and Maintenance Spending in Thousands, by Category and Fiscal Year (Adjusted for Inflation)

14010 37, 20	Total Board and Maintenance Spending								
	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	
RESIDENTIAL	\$203,295	\$207,025	\$226,330	\$243,089	\$229,208	\$271,929	\$298,067	\$309,057	
DCS FP PAYMENTS	\$26,804	\$35,847	\$35,947	\$37,900	\$39,624	\$35,263	\$29,447	\$30,603	
ADOPT/GUARD	\$0	\$0	\$4	-\$1	-\$3	\$4,991	\$15,135	\$16,100	
IL	\$0	\$0	\$0	\$0	\$383	\$1,101	\$1,043	\$1,083	
OTHER**	\$1	\$3	\$1	\$5	\$21,962	-\$482	\$5,307	\$3,445	
Grand Total	\$230,100	\$242,874	\$262,282	\$280,992	\$291,175	\$312,802	\$349,000	\$360,288	
			Proportion by I	Major Category					
RESIDENTIAL	88%	85%	86%	87%	79%	87%	85%	86%	
DCS FP PAYMENTS	12%	15%	14%	13%	14%	11%	8%	8%	
ADOPT/GUARD	0%	0%	0%	0%	0%	2%	4%	4%	
IL	0%	0%	0%	0%	0%	0%	0%	0%	
OTHER**	0%	0%	0%	0%	8%	0%	2%	1%	
Grand Total	100%	100%	100%	100%	100%	100%	100%	100%	

^{**}Other includes Cashering Clearing Account, Child & Family Well Being, Child Permanency Program, Wrap Around Services, and Foster Care Recruitment

As Figure 37 depicts (below), across the eight fiscal years, spending on DCS foster parent payments increased by a total of 48 percent (\$27M to \$39M) between SFY12 and SFY16, dipping the following three fiscal years. During that same time, spending related residential care increased by a total of 52 percent (\$203M to \$309M); change for Residential spending during the Waiver period only was 37 percent. However, as a proportion

of total OOH board and maintenance, Residential expenses stayed fairly steady at about 85 percent, and the proportion of DCS foster parent payments slowly declined to 8 percent as the proportion of Adoption and Guardianship payments increased to 4 percent of total OOH board and maintenance costs.

In the following section, we explore these spending shifts alongside information around care day usage.

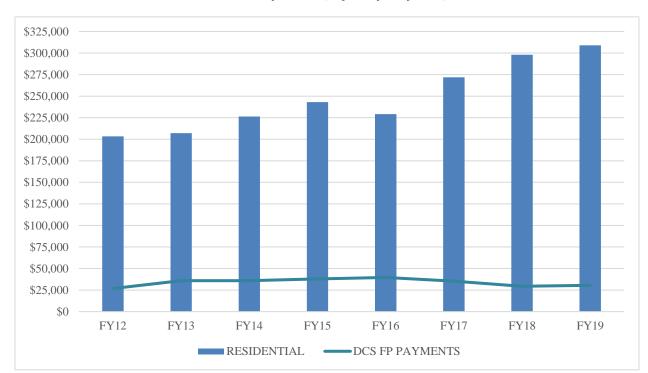


Figure 37. OOH Board & Maintenance: Change in Residential and DCS FP Expenditures – Costs by SFY in Thousands of Dollars (Adjusted for Inflation)

Placement Days and Unit Costs

As mentioned earlier, in order for TN to reduce foster care spending overall, there are three options: reduce the numbers of paid care days, reduce the average cost of a care day, or both. This can be accomplished by any one of the following (or by some combination): a decrease in the number of children coming into care; an increase in the number of children leaving care; a decrease in the length of time children remain in care; increased use of less expensive types of care (i.e.: kinship care, family foster care); and/or decreased use of more expensive types of care (i.e.: congregate care). Below we present data on trends in care day use and unit costs in TN.

Table 29 details the number of care days used in TN in total for each fiscal year. This count includes all children who were in care at the start of the fiscal year as well as all children admitted to care during the fiscal year. The count includes all of the days that children spent in *any type of foster care* (including kinship care, treatment foster care, and detention) during the associated fiscal year. The number of care days used fluctuated between SFY12 and SFY17, but rose consistently for the last two years of the observation period (SFY18 – SFY19). When we look across all eight years, the change is an overall increase in care day use of 10 percent between SFY12 to SFY19.

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²¹ Data on placement days by placement type comes from the Chapin Hall Multistate Foster Care Data Archive (FCDA). The FCDA is a longitudinal data warehouse developed and maintained by the Center for State Child Welfare Data at Chapin Hall. The FCDA utilizes child-level data from TFACTS.

Table 38. Total OOH Placement Days and Percent Change by Fiscal Year

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19
Annual Count of Paid Placement Days (all days and types)	2,582,821	2,671,008	2,686,098	2,578,080	2,604,960	2,600,823	2,790,739	2,842,968
% Change from Prior Year		3%	1%	-4%	1%	0%	7%	2%

Utilizing the total OOH board and maintenance spending for each fiscal year, we examine the average daily cost of paid placement in Table 30 below. Average daily unit cost is calculated by dividing total OOH board and maintenance spending by the number of care days used.

Table 39. Average Daily Cost of OOH Placement (Adjusted for Inflation)

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	Waiver Change
OOH Board and	\$230,100,134	\$242.874.080	\$262,281,979	\$280,991,931	\$291,174,905	\$312,802,343	\$349,000,186	\$360.287.674	37%
Maintenance	Ψ230,100,134	Ψ2+2,07+,000	Ψ202,201,777	Ψ200,771,731	Ψ2/1,1/4,703	Ψ312,002,343	ψ3+7,000,100	Ψ300,201,014	3770
Annual Count of Paid	2,582,821	2,671,008	2,686,098	2,578,080	2,604,960	2,600,823	2,790,739	2,842,968	6%
Placement Days (all	, ,	, ,	, ,	, ,	, ,	, ,	, ,	, ,	
days and types)									
Average Unit Cost of	\$89.09	\$90.93	\$97.64	\$108.99	\$111.78	\$120.27	\$125.06	\$126.73	30%
OOH Care									

As highlighted in Tables 29 and 30, TN is experiencing a decrease in care day usage while experiencing an increase in OOH board and maintenance spending. One potential reason for a shift of this nature is the use of fewer, yet more expensive, care days. For example, more restrictive settings such as residential care facilities and primary treatment centers are far more expensive than less restrictive settings such as foster homes and kinship homes. Below we look at care day usage by placement type to begin the process of exploring this dynamic.

Table 40. Care Day Usage by Placement Type and Fiscal Year

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	Waiver Change
Congregate Care	551,510	534,918	540,527	514,235	512,624	518,449	510,842	486,294	-10%
Detention	31,337	29,589	27,557	32,761	34,832	34,058	35,493	31,339	14%
Emergency	16,716	17,472	17,822	17,302	18,813	17,976	18,569	16,203	-9%
Family Foster Care	1,532,480	1,612,347	1,611,995	1,584,338	1,610,867	1,631,549	1,765,803	1,832,180	14%
Kinship Care	435,243	445,803	441,154	375,535	369,968	340,609	400,428	414,086	-6%
Independent Living	10,413	26,209	43,635	49,782	52,680	53,244	52,168	57,396	32%
Other	5,122	4,670	3,408	4,127	5,176	4,938	7,436	5,470	61%
Total Care Days Used	2,582,821	2,671,008	2,686,098	2,578,080	2,604,960	2,600,823	2,790,739	2,842,968	6%

While there was an overall increase in care days of 6 percent during the Waiver period, when comparing SFY14 to SFY19, the change looks different by care type. Congregate care and kinship care days both decreased during that same period (by 10 and 6 percent respectively) while family foster care days increased by 14 percent. Independent Living saw the largest increase of 32 percent. See Figure 37 for a collapsed view of care day use by placement type. Here, "Group Setting" includes congregate care, detention, and emergency. Similarly, "Family Setting" includes family foster and kinship care, and "Other" includes Independent Living and all other care days.

2,250,000

1,750,000

1,250,000

250,000

FY12 FY13 FY14 FY15 FY16 FY17 FY18 FY19

-250,000

■ Group Setting

Figure 38. Care Day Usage by Placement Type and Fiscal Year

Table 32 below displays care day use by restrictive level of placement and highlights that the use of more restrictive types of care days (i.e.: more expensive) decreased by 8 percent from SFY14 to SFY19 while the use of less restrictive types of care days (i.e.: less expensive) increased by 9 percent from SFY14 to SFY19.

■ Family Setting

■ Other

Table 41. Care Day Usage Change during Waiver Period by Setting Type²²

LESS	Family Foster Care	14%			
RESTRICTIVE SETTINGS	Kinship Care	-6%			
Overall Change in Use of Less Restrictive Care Days (FY14 – FY19)					
	Congregate Care	-10%			
MORE RESTRICTIVE SETTINGS	Detention	14%			
	Emergency	-9%			

²² Change is calculated by subtracting SFY14 totals from SFY19 totals and dividing by SFY12 totals.

Of total care days used by SFY, family settings account for nearly 80 percent of all days. Residential facilities, on the other hand, account for about 20 percent of all days. Yet, we know that residential facilities are more restrictive and at higher costs. Below, Table 33 explores the spending and care day usage by SFY for residential care only.

Table 42. Average Daily Cost of Residential Placement (Adjusted for Inflation)

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19
OOH B & M								
Residential	\$203,294,743	\$207,024,804	\$226,329,519	\$243,088,582	\$229,208,500	\$271,928,842	\$298,067,416	\$309,057,258
Only								
Annual								
Count of Paid	599,563	581,979	585,906	564,298	566,269	570,483	564,904	533,836
Residential	377,303	301,777	363,700	304,270	300,207	370,403	304,704	333,030
Days								
Unit Cost								
Residential	\$339.07	\$355.73	\$386.29	\$430.78	\$404.77	\$476.66	\$527.64	\$578.94
Care								

Although care day usage of residential care decreased by 9 percent, the unit cost and the overall cost of residential care increased (50 percent and 37 percent, respectively). This is where we see the vast majority of the increase in the average unit cost of foster care. Additionally, the increase in residential care unit costs far outpaces the decrease in care days used. This points to an increase in the cost of the residential care used.

OOH Placement Expenditure Structure

To the understand shifts in OOH board and maintenance costs, we must take into account their expenditure structure. Total OOH board and maintenance expenditures are influenced by two components: price of care and quantity of care days. In other words, how much a child welfare system spends on out-of-home placements (expenditures) is a function of how much that collection of services costs per day (price) and the number of care days for which it is provided (quantity).

OOH Board and Maintenance Expenditures = Price * Quantity

In short, a change in the average cost per care day or in the number of care days would affect the total OOH board and maintenance expenditures. In Tennessee during the Waiver, quantity of OOH care rose alongside an increase in total costs. However, the increase in total OOH board and maintenance expenditures (37 percent) far outpaced the rise in care days (6 percent) during the Waiver. This points to price being the main driver of the spending increase. And, as we saw in the section above, the increasing costs of Residential board and maintenance were the greatest influencing factor.

Summary, Lessons Learned, and Next Steps

TNDCS set out to do several things as part of their Waiver demonstration:

- Implement a brief decision-support and service planning tool for families involved in noncustodial programs
- Implement a foster parent training program, KEEP, for the purpose of improving permanency outcomes for children in out of-home care, particularly children who enter care between the ages of 4 and 12 years old.
- Offer Nurturing Parenting Program to non-custodial families at risk of placement in foster care

In fact, TNDCS made significant inroads on all three fronts. Compliance with FAST regulations is consistently above 85 to 90 percent. KEEP is now operating in some capacity in all 12 regions across the State. The Nurturing Parenting Program is being offered by three contract agencies, covering families from six regions. To be sure, these are significant accomplishments. Each on its own required a considerable (and continuous) marshaling of resources across various staff roles. The fact that much of this activity happened simultaneously is noteworthy.

At this point, TNDCS – like child welfare systems from other Waiver states – needs to consider the extent to which they will carry forward their Waiver-period investments into the post-Waiver world. The findings presented throughout this Final Evaluation Report may help to inform those conversations. As noted above, the FAST is being completed in line with expectations. A FAST is being completed in the vast majority of non-custodial cases. Where there is room for improvement, though, is in the extent to which the FAST is being used to inform case decisions that have yet to be made, rather than to provide justification for case decisions that have already been made. Another consideration is whether one of the FAST's chief assets – its brevity – may also be its shortcoming, at least in terms of the degree to which the tool is nuanced enough to inform the kinds of service planning and other case decisions that it is designed to help make.

The impact analysis for KEEP demonstrated a positive effect for permanency outcomes, albeit just at the cusp of statistical significance, during the time when KEEP was operational. How should TNDCS interpret this finding? Again, given the degree to which the target population was really touched by KEEP (both in terms of foster parent training and children's exposure to that training), it is difficult to say. If TNDCS decides to continue with KEEP it seems imperative that there be some heightened attention to the implementation of the program. There are a lot of opportunities to still reach members of the target population – both foster parents and children. Doing so may involve a rethinking of implementation plans in one region or another, or some other course-correction. But plainly put, there is quite a lot more value TNDCS could derive from KEEP, given the nature of the investment.

The implementation story for NPP is, in many ways, still unfolding. The implementation effort first began in September 2017 – just two years before the end of the Waiver period. What we know at this point is: (1) a fairly small proportion of the non-custodial population passes the first threshold of NPP eligibility (FAST scores); (2) of those that meet the FAST threshold, a relatively small proportion go on to be referred to NPP. From there, the "of those…" counts start to get smaller and smaller, but it is at these two points – initial eligibility and referrals – where the biggest drop-offs take place. For TNDCS, it seems important to better understand why a relatively small fraction of families who would appear, on their face, to be eligible for NPP are not being referred to an NPP provider. Are TNDCS staff using their

discretion, and making judgements as to who may or may not be a good fit for the program, despite FAST scores? Are TNDCS staff aware of some kind of waiting list at the NPP providers, which may serve as a deterrent to making the referral at all? Are the NPP providers pre-screening potential referrals? Whatever the case, if DCS wants to get the most out of this investment, it is imperative that eligible families make their way to the program.

Implementing new ideas in the oft-times temperamental environment that is child welfare services is, in nearly all cases, a difficult thing to do. It takes commitment and time – more time than is usually available. For TNDCS, it would appear that more time is necessary to see whether Waiver investments will pay off in the expected ways, time for implementation protocols to be bolstered and put into action. TNDCS has made sound decisions, based on evidence and in the name of advancing evidence-based practices in the field. At this point, those decisions just need to be tested, to see if they help children and families as intended.

Appendix A: Detailed Results from the General Staff Survey

Scales by GSS Wave

Table 43. Scale Results, by Wave²³

	Data Source	N	Mean	Std. Deviation
Administrative Leadership	GSS1	197	4.58	1.04
•	GSS2	269	5.22	1.01
	Overall	360	4.90	1.03
Shared Vision	GSS1	166	3.73	1.52
	GSS2	194	5.25	0.85
	Overall	349	4.73	1.24
Supervision A ^a	GSS1	166	5.05	1.14
-	GSS2	182	5.37	1.22
	Overall	274	5.29	1.16
Supervision B ^a	GSS1	166	4.31	1.95
-	GSS2	181	5.40	1.27
	Overall	273	4.92	1.61
General Confidence in Services	GSS1	196	4.91	1.09
	GSS2	271	5.24	0.92
	GSS3 ^b	321	5.03	1.15
	Overall	788	5.06	1.05
Confidence in Specific Services	GSS1	196	4.81	1.15
•	GSS2	271	4.49	1.00
	GSS3	442	4.47	1.12
	Overall	909	4.59	1.09
Process Case Skills ^a	GSS1	165	5.55	0.81
	GSS2	184	5.63	0.67
	Overall	272	5.57	0.73
Interpersonal Case Skills ^a	GSS1	165	5.70	0.78
-	GSS2	184	5.64	0.65
	Overall	272	5.67	0.71
Workload Concerns ^a	GSS1	166	4.83	1.68
	GSS2	185	4.78	1.54
	GSS3	285	5.05	1.44
	Overall	636	4.89	1.55

²³ In order to enable deeper exploration into supervisory dynamics in the GSS3, a number of scales administered in the GSS1 and GSS2 were dropped. Further, GSS3 Results presented here are limited to those from the staff of the four East Grand Regions for comparability purposes.

	Data Source	N	Mean	Std. Deviation
Job Satisfaction	GSS1	209	4.76	1.29
	GSS2	273	5.22	1.40
	GSS3	454	4.92	1.13
	Overall	936	4.97	1.27
Family Preservation vs Child Safety	GSS1	196	2.17	12.70
	GSS2	271	3.47	12.75
	GSS3	442	6.37	13.05
	Overall	909	4.00	12.84
Proclivity to Prevent Removal	GSS1	196	3.65	1.37
	GSS2	271	3.47	1.31
	GSS3	444	3.67	1.30
	Overall	911	3.60	1.33
Proclivity to Reunify	GSS1	196	2.89	1.67
	GSS2	271	2.31	0.86
	GSS3	444	2.34	0.87
	Overall	911	2.51	1.13
External References Guide Case	GSS1	161	5.45	0.92
Closure ^a	GSS2	197	5.38	0.99
	GSS3	301	5.54	1.06
	Overall	659	5.46	0.99
Internal References Guide Case	GSS1	161	2.93	1.29
Closure ^a	GSS2	197	2.87	1.22
	GSS3	301	3.07	1.39
	Overall	659	2.96	1.30
Concerns about Liability ^a	GSS2	198	4.94	1.28
	GSS3	304	5.49	1.27
	Overall	502	5.22	1.28
Supervisory Instrumental Sppt ^a	GSS3	300	5.85	1.16
Supervisory Affective Sppt ^a	GSS3	300	5.11	1.61
Supervisory Educational Sppt ^a	GSS3	300	5.47	1.31
Supervisory Equity Sppt ^a	GSS3	300	5.78	1.21

^a These scales were only administered to staff carrying a caseload.

Repeated Measures Analysis Results

These results are limited to those scales that were examined across all three rounds of the GSS and results from the East Grand Regions.

General Confidence in Services

Table 44. Repeated Measures Main Effects for General Confidence in Services

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	572.656	5194.101	0.000
GSS ^a	2	362.681	5.285	0.005
East TN ^b	1	546.017	7.334	0.007
Northeast ^b	1	520.504	25.435	0.000
Smoky Mt.b	1	594.198	33.722	0.000

a Reference group is GSS3.

Table 45. Repeated Measures Simple Fixed Effects for General Confidence in Services

Estimates of Fixed Effects

						95% Confidence Interval		
Parameter	Estimate	Std. Error	df	t	Sig.	Lower Bound	Upper Bound	
Intercept	5.459623	0.088875	617.475	61.430	0.000	5.285089	5.634157	
GSS1 ^a	-0.156020	0.094439	367.424	-1.652	0.099	-0.341728	0.029688	
GSS2 ^a	0.110115	0.073442	342.457	1.499	0.135	-0.034338	0.254569	
East TN ^b	-0.320660	0.118406	546.017	-2.708	0.007	-0.553247	-0.088073	
Northeast ^b	-0.511155	0.101354	520.504	-5.043	0.000	-0.710268	-0.312043	
Smoky Mt.b	-0.641787	0.110518	594.198	-5.807	0.000	-0.858842	-0.424733	

a Reference group is GSS3.

b Reference group is Knox.

b Reference group is Knox.

Confidence in Specific Types of Services

Table 46. Repeated Measures Main Effects for Overall Confidence in Specific Services

Type III Tests of Fixed Effects

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	606.552	4631.636	0.000
GSS ^a	2	312.097	11.236	0.000
East ^b	1	621.977	30.139	0.000
Northeast ^b	1	586.133	61.370	0.000
Smoky Mt.b	1	647.635	62.306	0.000

^a Reference group is GSS3.

Table 47. Repeated Measures Simple Effects for Overall Confidence in Specific Services

Estimates of Fixed Effects

Estimates of Fixed Effects							
Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Intercept	5.084761	0.082472	710.471	61.654	0.000	4.922843	5.246679
GSS1 ^a	0.333690	0.084566	285.620	3.946	0.000	0.167239	0.500142
GSS2 ^a	-0.050638	0.061840	298.560	-0.819	0.414	-0.172335	0.071060
East ^b	-0.642502	0.117034	621.977	-5.490	0.000	-0.872333	-0.412672
Northeast ^b	-0.798660	0.101950	586.133	-7.834	0.000	-0.998891	-0.598429
Smoky Mt.b	-0.845644	0.107133	647.635	-7.893	0.000	-1.056013	-0.635274

^a Reference group is GSS3.

^b Reference group is Knox.

^b Reference group is Knox.

Workload Concerns

Table 48. Repeated Measures Main Effects for Workload Concerns

Type III Tests of Fixed Effects

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	459.027	1426.775	0.000
GSS ^a	2	203.495	3.893	0.022
East TN ^b	1	461.787	1.903	0.168
Northeast ^b	1	460.672	3.427	0.065
Smoky Mt. ^b	1	471.020	6.020	0.015

^a Reference group is GSS3.

Table 49. Repeated Measures Simple Effects for Workload Concerns

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Intercept	4.894338	0.134285	481.287	36.447	0.000	4.630480	5.158196
GSS1 ^a	-0.282832	0.142347	215.861	-1.987	0.048	-0.563400	-0.002263
GSS2 ^a	-0.313375	0.122435	209.962	-2.560	0.011	-0.554736	-0.072015
East TN ^b	-0.271967	0.197131	461.787	-1.380	0.168	-0.659352	0.115417
Northeast ^b	0.311014	0.167997	460.672	1.851	0.065	-0.019122	0.641150
Smoky Mt.b	0.446046	0.181802	471.020	2.453	0.015	0.088803	0.803288

^a Reference group is GSS3.

^b Reference group is Knox.

^b Reference group is Knox.

Job Satisfaction

Table 50. Repeated Measures Main Effects for Job Satisfaction

Type III Tests of Fixed Effects

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	588.091	2735.123	0.000
GSS ^a	2	346.221	9.177	0.000
East TN ^b	1	623.747	0.029	0.864
Northeast ^b	1	584.386	0.255	0.614
Smoky Mt.b	1	651.872	0.006	0.938

^a Reference group is GSS3.

Table 51. Repeated Measures Simple Effects for Job Satisfaction

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Intercept	5.252593	0.107800	709.141	48.725	0.000	5.040947	5.464239
GSS1 ^a	-0.405076	0.101269	301.640	-4.000	0.000	-0.604359	-0.205793
GSS2 ^a	-0.025465	0.098462	364.779	-0.259	0.796	-0.219089	0.168158
East TN ^b	0.026022	0.152003	623.747	0.171	0.864	-0.272478	0.324522
Northeast ^b	-0.066478	0.131587	584.386	-0.505	0.614	-0.324919	0.191962
Smoky Mt.b	0.010838	0.139147	651.872	0.078	0.938	-0.262393	0.284068

^a Reference group is GSS3.

^b Reference group is Knox.

^b Reference group is Knox.

Child Safety vs. Family Preservation

Table 52. Repeated Measures Main Effects for Child Safety vs. Family Preservation

Type III Tests of Fixed Effects

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	626.282	27.417	0.000
GSS ^a	2	297.350	4.220	0.016
East TN ^b	1	646.649	0.124	0.725
Northeast ^b	1	620.911	1.026	0.311
Smoky Mt.b	1	655.626	0.098	0.754

^a Reference group is GSS3.

 ${\it Table~53.} \ \textit{Repeated Measures Simple Effects for Child Safety vs. Family Preservation}$

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Intercept	6.447484	1.024170	699.806	6.295	0.000	4.436670	8.458299
GSS1 ^a	-2.665753	0.952873	302.226	-2.798	0.005	-4.540859	-0.790647
GSS2 ^a	-1.648439	0.806771	323.263	-2.043	0.042	-3.235624	-0.061254
East TN ^b	-0.517434	1.470208	646.649	-0.352	0.725	-3.404392	2.369524
Northeast ^b	-1.299197	1.282608	620.911	-1.013	0.311	-3.817972	1.219577
Smoky Mt.b	0.419367	1.340291	655.626	0.313	0.754	-2.212413	3.051148

^a Reference group is GSS3.

^b Reference group is Knox.

^b Reference group is Knox.

Proclivity to Prevent Removal

Table 54. Repeated Measures Main Effects for Proclivity to Prevent Removal

Type III Tests of Fixed Effects

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	579.014	1541.496	0.000
GSS ^a	2	302.281	1.626	0.198
East TN ^b	1	608.231	7.512	0.006
Northeast ^b	1	562.395	2.163	0.142
Smoky Mt.b	1	630.178	0.004	0.951

^a Reference group is GSS3.

 ${\it Table~55.}\ Repeated\ Measures\ Main\ Effects\ for\ Proclivity\ to\ Prevent\ Removal$

Estimates of Fixed Effects 95% Confidence Parameter Estimate Std. Error df t Sig. Interval Lower Upper Bound Bound 0.000 3.780496 0.102283 677.474 36.961 3.981327 Intercept 3.579666 GSS1^a 0.051161 0.102922 238.382 0.497 0.620 0.253915 -0.151592 GSS2^a -0.136468 0.088373 306.741 -1.544 0.124 -0.310362 0.037426 East TN^b -0.402484 0.146848 608.231 -2.7410.006 -0.690874 -0.114094 Northeast^b 562.395 -1.471 0.142 -0.439386 0.063113 -0.188137 0.127915 Smoky Mt.b -0.008165 630.178 -0.061 0.951 0.133706 -0.270728 0.254398

^b Reference group is Knox.

^a Reference group is GSS3.

^b Reference group is Knox.

Proclivity to Reunify

Table 56. Repeated Measures Main Effects for Proclivity to Reunify

Type III Tests of Fixed Effects

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	607.975	934.357	0.000
GSS ^a	2	268.416	12.696	0.000
East TN ^b	1	568.197	0.579	0.447
Northeast ^b	1	539.517	0.319	0.573
Smoky Mt. ^b	1	587.230	0.930	0.335

^a Reference group is GSS3.

Table 57. Repeated Measures Simple Effects for Proclivity to Reunify

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Intercept	2.239423	0.076771	626.840	29.170	0.000	2.088664	2.390182
GSS1 ^a	0.662169	0.134760	211.226	4.914	0.000	0.396523	0.927815
GSS2 ^a	-0.011362	0.067260	369.596	-0.169	0.866	-0.143621	0.120898
East TN ^b	-0.084334	0.110846	568.197	-0.761	0.447	-0.302052	0.133383
Northeast ^b	-0.055166	0.097693	539.517	-0.565	0.573	-0.247070	0.136738
Smoky Mt.b	-0.096287	0.099841	587.230	-0.964	0.335	-0.292377	0.099802

^a Reference group is GSS3.

^b Reference group is Knox.

^b Reference group is Knox.

Reliance on External Cues for Case Closure Decisions

Table 58. Repeated Measures Main Effects for Case Closure - External Cues

Type III Tests of Fixed Effects

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	465.356	844.235	0.000
GSS ^a	2	206.939	1.802	0.167
East TN ^b	1	473.001	0.111	0.740
Northeast ^b	1	452.249	1.642	0.201
Smoky Mt.b	1	499.298	0.666	0.415

^a Reference group is GSS3.

Table 59. Repeated Measures Simple Fixed Effects for Case Closure - External Cues
Estimates of Fixed Effects

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Intercept	3.171304	0.119509	535.645	26.536	0.000	2.936541	3.406067
GSS1 ^a	-0.158034	0.113290	198.142	-1.395	0.165	-0.381443	0.065375
GSS2 ^a	-0.180813	0.101204	264.885	-1.787	0.075	-0.380081	0.018454
East TN ^b	-0.057176	0.171993	473.001	-0.332	0.740	-0.395140	0.280788
Northeast ^b	-0.185121	0.144485	452.249	-1.281	0.201	-0.469067	0.098825
Smoky Mt.b	-0.130028	0.159272	499.298	-0.816	0.415	-0.442954	0.182899

^aReference group is GSS3.

^b Reference group is Knox.

^b Reference group is Knox.

Reliance on Internal Cues for Case Closure Decisions

Table 60. Repeated Measures Main Effects for Case Closure - Internal Cues

Type III Tests of Fixed Effects

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	465.356	844.235	0.000
GSS ^a	2	206.939	1.802	0.167
East TN ^b	1	473.001	0.111	0.740
Northeast ^b	1	452.249	1.642	0.201
Smoky Mt. ^b	1	499.298	0.666	0.415

^a Reference group is GSS3.

Table 61. Repeated Measures Simple Effects for Case Closure - Internal Cues

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Intercept	3.171304	0.119509	535.645	26.536	0.000	2.936541	3.406067
GSS1 ^a	-0.158034	0.113290	198.142	-1.395	0.165	-0.381443	0.065375
GSS2 ^a	-0.180813	0.101204	264.885	-1.787	0.075	-0.380081	0.018454
East TN ^b	-0.057176	0.171993	473.001	-0.332	0.740	-0.395140	0.280788
Northeast ^b	-0.185121	0.144485	452.249	-1.281	0.201	-0.469067	0.098825
Smoky Mt.b	-0.130028	0.159272	499.298	-0.816	0.415	-0.442954	0.182899

^a Reference group is GSS3.

^b Reference group is Knox.

^bReference group is Knox.

Supervision Results

Figure 39. Topics Discussed in Supervision: Average Scores

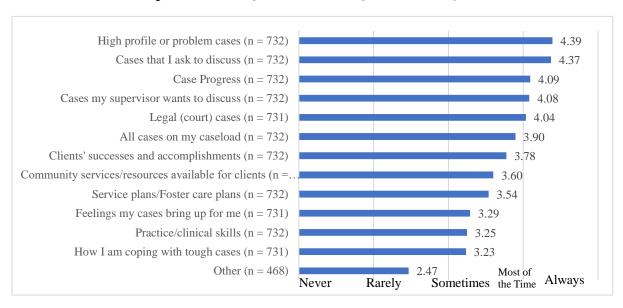


Table 62. Items Composing the Four GSS3 Supervisory Domains

Instrumental Support Items (Cronbach's alpha = .977)	N	Mean	Std. Deviation
Overall Supervisor Instrumental Support Score	722	5.72	1.26
Knowledgeable of agency policies and procedures.	721	6.00	1.24
Has expertise in this work.	721	5.99	1.29
Competent in doing his/her job.	722	5.91	1.39
Is knowledgeable about effective ways to work with children and families.	722	5.85	1.32
Knowledgeable about effective ways to work with clients we serve.	722	5.79	1.36
Follows up with reminders of recommendations and assignments.	721	5.74	1.41
Models appropriate personal/professional boundaries.	718	5.74	1.55
Communicates policy and practice changes so I get exactly the information I need to do my job.	721	5.74	1.43
Available when I ask for help.	722	5.69	1.50
Models good practice skills with clients.	717	5.69	1.50
Uses her own experience doing the job to help me put my own job- related experiences into perspective.	718	5.66	1.49
Pitches in and helps handle emergencies.	720	5.64	1.68
Reinforces information and skills learned in training.	722	5.62	1.41
Helps me learn and improve.	722	5.59	1.51
Help me learn the ropes of agency.	722	5.50	1.56
Decision-making is consistent.	722	5.38	1.64

Instrumental Support Items (Cronbach's alpha = .977)	N	Mean	Std. Deviation
Affective Support Items (Cronbach's <i>alpha</i> = .979)	N	Mean	Std. Deviation
Overall Supervisor Affective Support Score	722`	5.11	1.50
Encourages creative solutions.	722	5.48	1.51
Listens without giving advice or judgment.	721	5.31	1.69
Provides a safe place to talk about feeling overwhelmed.	721	5.29	1.81
Lets me know it's okay to talk about my mistakes.	720	5.28	1.74
Talks with me about the importance of self-care when working in the child protection field.	720	5.24	1.79
Helps me to see how what I'm doing is making a difference.	721	5.20	1.78
Helps me to recognize when a particular case is stressing me out.	721	5.15	1.79
Encourages me to share thoughts and feelings of emotional impact of work.	722	5.11	1.84
Helps workers develop safety plans to protect themselves.	722	5.00	1.87
Promotes self-reflection.	721	4.91	1.94
Provides information about expected effects of trauma.	722	4.87	1.84
Asks me about what motivates me.	721	4.82	1.89
Offers opportunity to discharge the emotions that can build up in a day.	722	4.78	2.01
Educational Support Items (Cronbach's <i>alpha</i> = .979)	N	Mean	Std. Deviation
Supervisor Educational Support Score	719	5.38	1.39
Suggests trainings I might attend.	717	5.65	1.42
Provides examples when teaching a skill.	716	5.54	1.53
Assists me in setting and assessing long-term case goals.	716	5.51	1.52
Arranges for staff to share what they've learned at training with the rest of the team.	717	5.42	1.65
Provides opportunities to try new things.	716	5.41	1.53
Points out the positive attributes of my clients.	717	5.39	1.50
Offers feedback on my writing skills to improve quality and completeness.	717	5.36	1.60
Appropriately challenges any personal bias which affects my work.	717	5.35	1.51
Encourages me to connect training I have received to specific case situations and/or my intervention efforts.	716	5.34	1.59
Implements strategies to help manage caseload burden.	717	5.31	1.69
Uses observations of my work in the field to help me improve my	716	5.30	1.65
practice skills.			
challenges me when I have unreasonable expectations for clients. Works with me to understand how my experiences impact my handling	716	5.22	1.56

Instrumental Support Items (Cronbach's alpha = .977)	N	Mean	Std. Deviation
Equity Support Items (Cronbach's alpha = .971)	N	Mean	Std. Deviation
Overall Supervisor Equity Support Score	722	5.65	1.32
Supports taking time off to deal with family emergencies.	721	5.92	1.45
Is available for consultation when I have a case crisis.	718	5.88	1.36
Acknowledges when I have made progress toward performance goals.	719	5.79	1.39
Tells me when I've done a good job.	721	5.72	1.60
Takes time to understand my side of the situation when there is a complaint.	720	5.65	1.55
Evenly distributes cases among workers.	722	5.65	1.47
Notices when I have gotten better at doing something.	717	5.62	1.51
Acknowledges when my caseload/workload is particularly heavy.	718	5.61	1.56
Listens to me explain the situation/issue before providing input.	721	5.56	1.60
Provides encouragement when I'm having a hard time.	720	5.55	1.69
Appropriately flexible when it comes to applying rules.	722	5.54	1.56
Takes an interest in me as a person.	721	5.53	1.70
Encourages me to balance work and personal life.	718	5.42	1.69

GSS3 Results²⁴

Table 63. ANOVA Results by Program Area

				Std.			
		N	Mean	Deviation	df	\mathbf{F}	Sig.
General Confidence in Services	Overall	798	4.95	1.16	3	6.115	0.000
	CPS-A	214	5.02	1.20			
	CPS-I	161	4.94	1.14			
	FSS &	83	5.39	0.92			
	FCIP						
	FSW	340	4.80	1.17			
Confidence in Specific Services	Overall	1064	4.35	1.11	3	1.179	0.316
	CPS-A	272	4.32	1.14			
	CPS-I	226	4.26	1.07			
	FSS &	103	4.47	1.12			
	FCIP						
	FSW	463	4.39	1.11			
Confidence in Mental Health	Overall	1064	4.54	1.49	3	1.344	0.259
Services	CPS-A	272	4.54	1.53			

²⁴ These results include responses from all regions across the state in order to present the most robust assessment of relationships.

				Std.			
		N	Mean	Deviation	df	F	Sig.
	CPS-I	226	4.38	1.36			
	FSS &	103	4.70	1.52			
	FCIP						
	FSW	463	4.57	1.51			
Confidence in Substance Abuse	Overall	1063	4.28	1.60	3	0.825	0.480
Treatment Services	CPS-A	271	4.32	1.65			
	CPS-I	226	4.15	1.51			
	FSS &	103	4.42	1.63			
	FCIP	4.50	4.20				
	FSW	463	4.29	1.61			
Confidence in Domestic	Overall	1064	4.16	1.60	3	0.526	0.664
Violence/Shelter Services	CPS-A	272	4.18	1.70			
	CPS-I	226	4.18	1.52			
	FSS &	103	4.30	1.69			
	FCIP	4.60	4.10	1 5 5			
~ #1 1 7	FSW	463	4.10	1.55		0.000	0.011
Confidence in Food	Overall	1064	5.02	1.43	3	0.320	0.811
Services/Food Pantry Services	CPS-A	272	5.00	1.52			
	CPS-I	226	4.96	1.35			
	FSS &	103	5.12	1.31			
	FCIP	460	5.00	1 45			
	FSW	463	5.03	1.45		4 4 4 4 2	0.221
Confidence in Housing Assistance	Overall	1064	3.71	1.53	3	1.143	0.331
Services	CPS-A	272	3.61	1.54			
	CPS-I	226	3.66	1.40			
	FSS &	103	3.67	1.54			
	FCIP	162	2.01	1.50			
	FSW	463	3.81	1.59		0.00=	0.054
Confidence in Utilities & Other	Overall	1064	4.05	1.50	3	0.237	0.871
Household Assistance Services	CPS-A	272	4.02	1.44			
	CPS-I	226	4.00	1.48			
	FSS &	103	4.07	1.56			
	FCIP	460	4.00	1.54			
	FSW	463	4.09	1.54		1006	0.100
Confidence in Parenting Classes	Overall	1064	4.86	1.54	3	1.936	0.122
Services	CPS-A	272	4.73	1.59			
	CPS-I	226	4.77	1.49			
	FSS &	103	5.09	1.54			
	FCIP	4.50	4.02	1.50			
	FSW	463	4.93	1.53			
Confidence in Household	Overall	1064	4.21	1.41	3	3.520	0.015
Management Support Services	CPS-A	272	4.13	1.45			

				Std.			
		N	Mean	Deviation	df	F	Sig.
	CPS-I	226	4.00	1.31			
	FSS &	103	4.44	1.54			
	FCIP	4.50		4.00			
	FSW	463	4.31	1.39			
Proclivity to Prevent Removal	Overall	1070	3.74	1.32	3	3.674	0.012
	CPS-A	275	3.56	1.26			
	CPS-I	225	3.71	1.30			
	FSS &	103	3.65	1.36			
	FCIP	4.67	2.00	1 22			
	FSW	467	3.88	1.33		0.000	0.000
Proclivity to Reunify	Overall	1070	2.36	1.07	3	8.229	0.000
	CPS-A	275	2.43	1.01			
	CPS-I	225	2.62	1.12			
	FSS & FCIP	103	2.33	0.95			
	FSW	467	2.21	1.07			
Child Safety vs. Family	Overall	1058	6.50	12.56	3	3.670	0.012
Preservation	CPS-A	277	5.03	12.47			
	CPS-I	219	8.57	11.80			
	FSS & FCIP	104	5.22	12.76			
	FSW	458	6.69	12.82			
Workload	Overall	689	4.93	1.50	3	3.055	0.028
	CPS_A	186	4.74	1.56			
	CPA_I	139	5.15	1.49			
	FSS & FCIP	71	4.67	1.45			
	FSW	293	5.01	1.46			
Job Satisfaction	Overall	1127	4.82	1.15	3	1.484	0.217
	CPS_A	291	4.71	1.23			
	CPA_I	241	4.88	1.10			
	FSS & FCIP	110	4.94	1.09			
	FSW	485	4.82	1.14			
External Cues for Case Closure	Overall	745	5.45	1.09	3	0.864	0.460
	CPS_A	203	5.44	1.11			
	CPA_I	147	5.33	1.12			
	FSS & FCIP	79	5.45	1.11			
	FSW	316	5.50	1.06			
Internal Cues for Case Closure	Overall	745	3.14	1.41	3	1.024	0.381
	CPS_A	203	3.23	1.41			
	CPA_I	147	2.97	1.41			
	FSS & FCIP	79	3.17	1.56			
	FSW	316	3.16	1.38			
Supervisor Affective Support	Overall	722	5.11	1.50	3	1.071	0.361

				Std.			
		N	Mean	Deviation	df	F	Sig.
	CPS-A	262	5.16	1.60			
	CPS-I	207	5.12	1.45			
	FSS & FCIP	102	5.43	1.40			
	FSW	442	5.20	1.50			
Supervisor Educational Support	Overall	719	5.38	1.39	3	3.012	0.029
	CPS-A	191	5.34	1.55			
	CPS-I	149	5.16	1.34			
	FSS & FCIP	73	5.73	1.12			
	FSW	306	5.43	1.36			
Supervisor Equity Support	Overall	722	5.65	1.32	3	2.668	0.047
	CPS-A	192	5.61	1.43			
	CPS-I	149	5.44	1.27			
	FSS &	73	5.93	1.17			
	FCIP						
	FSW	308	5.71	1.29			
Supervisor Instrumental Support	Overall	722	5.72	1.26	3	2.660	0.047
	CPS-A	192	5.61	1.39			
	CPS-I	149	5.58	1.23			
	FSS &	73	6.00	1.05			
	FCIP						
	FSW	308	5.79	1.21			
Concerns about Liability	Overall	754	5.35	1.41	3	1.563	0.197
	CPS-A	205	5.19	1.56			
	CPS-I	148	5.29	1.35			
	FSS & FCIP	81	5.47	1.45			
	FSW	320	5.44	1.33			

^{*}Sample sizes vary because some questions were only asked of caseworkers and some staff elected not to answer the questions.

Table 64. ANOVA Results by Role

		N	Mean	Std. Deviation	df	F	Sig.
General Confidence in	Overall	798	4.95	1.16	2	2.08	0.13
Services	Caseworker	738	4.96	1.14			
	Supervising CM3	43	4.60	1.42			
	Team Leader	17	5.08	1.14			
Confidence in Specific	Overall	1074	4.35	1.11	4	4.63	0.00
Services	Caseworker	751	4.40	1.15			
	Supervising CM3	59	4.02	0.89			
	Team Leader	200	4.16	0.98			

		N	Mean	Std. Deviation	df	F	Sig.
	Team Coordinator	44	4.63	1.07			
•	RA or DRA	20	4.75	0.95			
Confidence in Mental	Overall	1074	4.54	1.49	4	4.30	0.00
Health Services	Caseworker	751	4.61	1.52			
	Supervising CM3	59	4.08	1.43			
	Team Leader	200	4.28	1.38			
	Team Coordinator	44	4.84	1.35			
	RA or DRA	20	5.00	1.30			
Confidence in Substance	Overall	1073	4.27	1.60	4	4.39	0.00
Abuse Treatment Services	Caseworker	750	4.39	1.64			
	Supervising CM3	59	3.86	1.50			
	Team Leader	200	3.95	1.46			
	Team Coordinator	44	4.52	1.56			
	RA or DRA	20	4.05	1.54			
Confidence in Domestic Violence/Shelter Services	Overall	1074	4.15	1.59	4	3.30	0.01
	Caseworker	751	4.21	1.63			
	Supervising CM3	59	3.73	1.35			
	Team Leader	200	3.92	1.54			
	Team Coordinator	44	4.50	1.37			
	RA or DRA	20	4.60	1.43			
Confidence in Food	Overall	1074	5.02	1.43	4	1.90	0.11
Services/Food Pantry Services	Caseworker	751	5.01	1.48			
	Supervising CM3	59	4.85	1.37			
	Team Leader	200	4.99	1.34			
	Team Coordinator	44	5.41	1.21			
	RA or DRA	20	5.60	0.94			
Confidence in Housing Assistance Services	Overall	1074	3.70	1.53	4	3.54	0.01
	Caseworker	751	3.80	1.56			
	Supervising CM3	59	3.17	1.43			
	Team Leader	200	3.49	1.45			
	Team Coordinator	44	3.64	1.37			
	RA or DRA	20	3.85	1.53			
Confidence in Utilities & Other Household Assistance Services	Overall	1074	4.05	1.50	4	3.82	0.00
	Caseworker	751	4.10	1.53			
	Supervising CM3	59	3.61	1.46			
	Team Leader	200	3.86	1.41			
	Team Coordinator	44	4.39	1.35			
			4.70	1.24			
	RA or DRA	20	4.70	1.34			
Confidence in Parenting	RA or DRA Overall	20 1074	4.70 4.87	1.55	4	2.54	0.04

		N	Mean	Std. Deviation	df	F	Sig.
	Supervising CM3	59	4.64	1.48			
	Team Leader	200	4.74	1.51			
	Team Coordinator	44	5.34	1.27			
	RA or DRA	20	5.50	1.28			
Confidence in Household	Overall	1074	4.21	1.41	4	1.53	0.19
Management Support Services	Caseworker	751	4.23	1.44			
	Supervising CM3	59	4.19	1.36			
	Team Leader	200	4.05	1.34			
	Team Coordinator	44	4.41	1.35			
	RA or DRA	20	4.70	1.17			
Job Satisfaction	Overall	1134	4.83	1.15	4	3.60	0.01
	Caseworker	800	4.78	1.17			
	Supervising CM3	62	4.79	1.24			
	Team Leader	207	4.88	1.05			
	Team Coordinator	45	5.25	0.94			
	RA or DRA	20	5.48	1.18			
Child Safety vs. Family	Overall	1068	6.15	12.80	4	7.09	0.00
Preservation	Caseworker	747	8.08	12.35			
	Supervising CM3	58	4.76	12.99			
	Team Leader	201	2.75	12.19			
	Team Coordinator	42	-3.36	11.68			
	RA or DRA	20	-7.40	13.66			
Proclivity to Prevent	Overall	1080	4.27	1.32	4	5.37	0.00
Removal	Caseworker	757	4.18	1.33			
	Supervising CM3	60	4.03	1.31			
	Team Leader	199	4.52	1.21			
	Team Coordinator	44	4.80	1.18			
	RA or DRA	20	5.08	1.26			
Proclivity to Reunify	Overall	1080	5.65	1.07	4	20.77	0.00
	Caseworker	757	5.58	1.07			
	Supervising CM3	60	5.61	1.11			
	Team Leader	199	5.77	1.05			
	Team Coordinator	44	6.07	0.93			
	RA or DRA	20	6.33	0.62			

^{*}Sample sizes and the scales reported vary here because some questions were only asked of caseworkers and some staff elected not to answer the questions.